# HEALTH AND MEDICAL CARE

## Niagara County, New York

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Resources and Needs for Health and
Medical Care in Niagara County, New York



Study made by
New York State Health Preparedness Commission
in cooperation with the
Local Health Preparedness Committees in Niagara County

1944

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# FOREWORD

This report describes the public health and medical care facilities and services in Niagara County, New York, and discusses the present availability of medical, dental and nursing personnel in the County. It indicates the effectiveness of the services and presents suggestions for the consideration of the several local Health Preparedness Committees.

The Commission appreciates the assistance of the following individuals, representing the several professions and agencies, who have given so generously of their time in providing information and in assisting with the editing of the report.

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In addition to the professional organizations, hospitals, health, medical care and social welfare agencies in the County, thanks is due the New York State Departments of Audit and Control, Commerce, Education, Health, and Social Welfare; the State Postwar Public Works Planning Commission; the City Planning Board of Niagara Falls; the Hospital Service Corporation of Western New York; and the industries in Niagara County which provided information relative to the hospital and medical group insurance plans which they sponsor for the benefit of their respective employees.

The data have been collected, the charts made and the study written by Hildegarde Wagner, Field Director of Local Health Preparedness Committees of the Commission.

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# HIGHLIGHTS

The purpose of this report is to make suggestions, on the basis of fact, for improving the health and medical care facilities and services in Niagara County and to assist the New York State Health Preparedness Commission in familiarizing itself with the facilities, services, problems and needs of the County.

Niagara County, covering 533 square miles in northwestern New York State, is predominantly industrial and has an estimated population of 176,800, almost entirely white and one-fifth foreign-born. Three of every four persons live in the cities of Lockport, Niagara Falls and North Tonawanda, each city differing vastly from the others in cultural, industrial, financial, civil and medical care characteristics. Niagara Falls, with an estimated population of 89,100 has grown rapidly. With war imminent, and prior to the Japanese attack on Pearl Harbor, many of the urban industries converted to war manufacture. The concurrent influx of war workers caused housing shortages, overtaxing of transportation facilities, severe loads on sanitary installations, high wages, augmented local demands for goods and services, crowded hospitals and increased demands for medical care. Although there has been no alarming rise in the incidence of illness, including communicable disease, there is a Countywide acute shortage of nurses, dentists and hospital beds and a shortage of physicians in North Tonawanda. Since no extensive exodus of the newcomers is anticipated when the war ends, the County, and especially Niagara Falls, will undoubtedly have to plan its facilities and services for a population greater than that of the prewar period.

The County depends upon local services for medical care, using Buffalo and Rochester only for specialized services not available locally. The four general hospitals, now overcrowded and basing admissions on medical urgency, have a total of 3.1 beds per 1,000 population as compared with five or more beds per thousand considered requisite for adequate, prompt service. When the 61 new beds in North Tonawanda and the 100 in Niagara Falls, which have never been opened due to the nursing shortage, are put to use, there will be but 4.0 beds per 1,000 residents. The greatest bed shortage is, and will continue to be, in the Lockport City Hospital which serves a large part of the Rural County population in addition to the City's residents. In addition, Lockport neither allocates nor plans to reserve a modest number of beds for communicable disease cases. Furthermore, since a large proportion of the hospital admissions are hospitalization insurance, compensation and Emergency Maternity and Infant Care cases, the postwar admission rate will not decrease markedly unless there is widespread unemployment. The County Home Infirmary, which is not an approved hospital, frequently is used for general hospital and minor surgery service for medically indigent cases. Both the Niagara Sanatorium, which provides excellent and progressive care for the tuberculous, and the Niagara Falls Municipal Hospital, which cares for isolation cases, are operating far below capacity yet are admitting appropriate cases promptly.

Medical and dental care is provided by private practicing physicians and dentists and the hospitals. Payment for service to the medically indigent is by the departments of welfare and, to EMIC cases, by the federal government. All other groups pay for service either personally or through insurance. Although the quality of care to the medically indigent is reputed to be satisfactory, and the service administratively and financially acceptable to the departments of public welfare, the medical personnel feel that the fees are too low, the administrative details confusing and the eligibility requirements not sufficiently liberal. It should be noted that there is some local consensus that many individuals who are medically indigent, <u>but not on relief</u>, are reluctant to apply for assistance for medical care only because they dislike being regarded as public charges.

Approved laboratory service, so essential to the practice of scientific medicine, is available in Lockport and Niagara Falls, while North Tonawanda uses the service in Buffalo, which must be paid for on a fee basis. Both of these laboratories are under the direction of the same part-time physician who simultaneously is engaged in the clinical practice of medicine. Laboratories seeking approval today are not certified unless directed by a full-time director.

With the aging of the population, the demand for institutional care for the infirm and chronically ill is increasing. The general hospitals generally refuse admission to such cases; the seven nursing homes, reputed to be operating at capacity, are not within the financial capacity of patients unable to pay $18 to $25 per week; and the County Home Infirmary is overcrowded. To meet this situation the County plans to add a net of 50 beds to its Infirmary and Niagara Falls contemplates building a new 100 bed Municipal Hospital after the war. The latter will admit chronic, communicable disease and some acutely ill, medically indigent cases.

The official public health service is provided by the health departments in the cities and by local public health officers and public health nurses in the Rural County under the general supervision and with the technical assistance of the State Department of Health. The school medical inspection program, conducted by physicians, school nurses and dental hygienists, is sponsored by the city boards of education and Trustees of the Rural School Districts under the general supervision of the State Department of Education. In the Rural County the school nursing is done by the County public health nurses, in addition to their regular duties.

The public health service, largely centered in the clinics, the public health nurses and the sanitary inspectors, concentrates its program on the control of communicable disease, proper sanitation and health education. A number of diverse types of clinics are concentrated in Niagara Falls while Lockport locally finances only periodic immunization and weekly venereal disease clinics. Immunization clinics in the Rural County are conducted occasionally by the local health officers. Although Niagara Falls and the Rural County are making a sincere effort to build up adequate public health nursing staffs, the number now in Lockport and North Tonawanda are insufficient to provide adequate service. On the other hand, the amalgamation of the public health and school nursing programs at their present strength would not only be more economical, conserve manpower and eliminate the necessity of having both types of nurses visit the same family, but would also come closer to providing adequate service in all sections of the County. However, it should be emphasized that some local school officials feel that such a consolidation would tend to subordinate the school nursing in the total program and would make the nurses unavailable for determining the necessity of absences from the classroom, when such absences are purportedly due to illness.

In 1942 Niagara County, its minor civil divisions and schools spent $13,154,785 for all purposes, $76.81 for every man, woman and child in the County. Approximately $.04 of each tax dollar spent was for health and medical care - $\frac{3}{4}$ of a cent for official public health services, $2\frac{1}{4}$ cents for the Niagara Sanatorium, 1/3 of a cent for the school medical program and 4/5 of a cent for care of the medically indigent, exclusive of care in the County Home Infirmary.

The birth rate of the total County is greater and the death rate less than for Upstate New York. However, the birth rates for Lockport and the Rural County are less and the death rates greater than in Niagara Falls and North Tonawanda, due to the larger than normal number of elderly persons in the former communities. Two of every three deaths were caused by diseases usually associated with the older age group. Infant mortality rates are higher in the Rural County and Niagara Falls than in the rest of the County. Vaccinations for smallpox are either spasmodic or are not reported. The per cent of children under five immunized against diphtheria is satisfactory, except for

recent decreases in Lockport and the Rural County. In the last five years the incidence of chicken pox, measles, scarlet fever and whooping cough have ranged from few to epidemic proportions; the number of diphtheria and typhoid cases have been almost negligible; until the summer of 1944 poliomyelitis cases were few; there has been no smallpox; the annual number of pneumonia, cancer and tuberculosis cases have remained relatively constant. Although the recorded number of syphilis cases is increasing, this is due more to the reporting of cases discovered by Selective Service examinations and the medical departments of industries than to an actual increase of incidence, except for the "early syphilis" cases reported in Niagara Falls.

On the whole, the water and sewage sanitation is satisfactory and will be improved with the postwar construction of an emergency pumping station and the extension of the water distribution and trunk sewer systems of Lockport and the remodeling of the sewage treatment plant at Wilson. Further improvement could be attained by the installation of a sewage treatment plant and reserve water storage facility at North Tonawanda and the construction of sewer systems and sewage disposal plants at Olcott and Lewiston. The sanitary conditions in a number of schools in the rural area are unsatisfactory and should be remedied. The milk sanitation, especially the supervision of pasteurization plants, is satisfactory but the control of the quality of raw milk sold directly at the farms could be improved. The size of Niagara County and the public interest would warrant the employment of a County Milk Sanitarian to assume some of the duties now performed by the District State Milk Sanitarian. In the three cities the housing sanitation and overcrowding have not elicited the official attention they deserve.

The number of defects per 1,000 pupils examined in the school medical inspections ranged from 198 at Youngstown to 750 in Niagara Falls and 847 at Newfane. All the schools except those at Newfane and Wilson were below the number of defects per 1,000 examinations found in the State as a whole. Four of every five defects found were those of teeth, eyes and tonsils. Defects were extensively corrected in Lockport, Newfane, Niagara Falls, Wilson and Gasport, while only one-half or less were corrected in the other schools of the County.

The following suggestions for the improvement of health and medical care facilities and services in the County are listed by specific local areas so that each might readily consider those applicable to itself. Suggestions for revising or consolidating services sponsored or supervised by State departments have been made only when such changes conform with the policy of the department involved, for these suggestions can be effected within the County itself without waiting for prior action on the State level. It is hoped that the local official and voluntary agencies and organizations having a health interest and which have a concern in these suggestions will be consulted and their assistance enlisted in carrying out the suggestions.

## The County As A Whole 1/

1. Ascertain whether both the contemplated extension of the County Home Infirmary and the planned, new Niagara Falls Municipal Hospital are needed to meet the anticipated demands for institutional care of the chronically ill.

2. Consider the medical expediency and feasibility of constructing the proposed extension of the County Home Infirmary as a wing of an already established, approved general hospital.

3. Consider using one entire building of the Niagara Sanatorium for hospitalization of other than tuberculosis cases if the occupancy rate of the Sanatorium decreases steadily in the several years following the war. However, if a conversion is effected, the building should not be subjected to a double authority, i.e. the Sanatorium management and another official County agency or department.

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1/ Lockport, Niagara Falls, North Tonawanda and the Rural County.

4. Discontinue the practice of providing general hospital care and minor surgery service in the County Home Infirmary.

5. Establish an Approved County Laboratory (a) having branches in Lockport, Niagara Falls and North Tonawanda; (b) under the direction of a full-time director; and (c) financed by the County Government with State aid.

6. Formulate a Niagara County Medical Care Plan for the care of the medically indigent that will be administered uniformly by the County Department of Public Welfare and the departments of public welfare in each of the three cities

or

formulate separate medical care plans for each of these four departments, incorporating in each plan identical, detailed rate structures and reporting forms for practitioners and hospitals.

7. Encourage mass chest x-ray examinations among adult groups, especially industrial groups.

8. Encourage the reporting of smallpox vaccinations done by practicing physicians, rural health officers and the medical departments of industries. (This does not apply to Niagara Falls where such reporting is mandatory by State law.)

9. Encourage the practice of additional dentists in the County.

10. Consider the employment of a full-time, qualified milk sanitarian, paid by the County Government with State aid, to serve all sections of the County, especially the areas outside the cities.

11. Establish a County Health Committee 1/ composed of representatives of the three City Health Preparedness Committees, County Health Preparedness Committee, professional medical and related organizations, hospitals, Board of County Supervisors and schools to consider and promote the foregoing suggestions in the order of their importance to the health of the County. Refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution, yet are not the responsibility of any specific State department.

## Lockport City

1. Consider increasing the bed capacity for acutely ill patients at the Lockport City Hospital, and reserving some beds for communicable disease cases.

2. Increase the number of public health nurses markedly.

3. Inaugurate a home bedside nursing service as a part of the City's official public health nursing service.

4. Stimulate women and men to serve as Nurses Aides in the Lockport City Hospital.

5. Establish child health clinics and nurse-parent conferences.

6. Plan an effective means of securing a greater per cent of diphtheria immunizations among children under five years of age.

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1/ The proposed Committee should be carefully selected so that it will be geographically representative and composed of approximately 12 or less well qualified individuals.

7. Ascertain the reason for the low rate of defects per 1,000 pupils examined in the school medical inspections and take steps to remedy this situation.

8. Schedule the Venereal Disease Clinic at an hour more suitable to patients employed during the daytime.

9. Promote a more vigorous inspection and prosecution of infractions of municipal ordinances relative to plumbing, housing and overcrowding, and if such ordinances are inadequate, sponsor local remedial legislation.

10. Intensify and coordinate the health education programs now sponsored by the various local organizations.

11. Coordinate the services of the City Health Department and the medical departments of local industries.

12. The Lockport Health Preparedness Committee, in cooperation with the Council of Community Agencies, should consider and promote the foregoing suggestions relating to Lockport in the order of their importance to the health of the City; and refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution, yet are not the responsibility of any specific State department.

## Niagara Falls City

1. Ascertain whether or not the contemplated construction of the new Niagara Falls Municipal Hospital is necessary for the institutional care of chronically ill patients if the planned extension County Home Infirmary is consummated.

2. If the decision is made to build a new Municipal Hospital, consider the feasibility and medical expediency of building this structure as a wing of an already established, approved general hospital in the City.

3. Increase the number of public health nurses.

4. Stimulate women and men to serve as Nurses Aides in the hospitals within the City.

5. Consolidate the home bedside nursing service of the Niagara Falls Chapter of the American Red Cross with the City Bureau of Health.

6. Ascertain the reason for the low percentage of eye defects found in the school medical inspections and, if indicated, take steps to remedy this situation; and promote a program for increasing the number of dental defects treated.

7. Determine the cause for the infant mortality rate being higher in the City than in Lockport and North Tonawanda and take steps to lower it.

8. Promote a more vigorous inspection and prosecution of infractions of municipal ordinances relative to housing and overcrowding and, if ordinances relative thereto are inadequate, sponsor local remedial legislation.

9. Consider the employment of a full-time health educator by the City Bureau of Health who will intensify and coordinate the health education programs now carried on in the City by the various organizations.

10. Coordinate the services of the Bureau of Health more closely with the medical departments of local industries.

11. The Niagara Falls Health Preparedness Committee, in cooperation with the Niagara Falls Council of Social Agencies, should consider and promote the foregoing suggestions relative to Niagara Falls in the order of their importance to the health of the City; and refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution, yet are not the responsibility of any specific State department.

North Tonawanda City

1. Promote plans for the postwar construction of a sewage treatment plant and a reserve water facility.

2. Increase the number of public health nurses markedly.

3. Inaugurate a home bedside nursing service as a part of the City's official public health nursing service.

4. Stimulate women and men to serve as Nurses Aides in the DeGraff Memorial Hospital.

5. Increase the number or frequency of meeting of child health clinics conducted by physicians.

6. Ascertain the reason for the low rate of defects found per 1,000 pupils examined in the school medical inspections and, if indicated, take steps to remedy this situation; and promote a program for increasing the number of defects treated, especially those of teeth and tonsils.

7. Schedule the Venereal Disease Clinic at an hour more suitable to patients employed in the daytime.

8. Promote a more vigorous inspection and prosecution of infractions of municipal ordinances relative to plumbing, housing and overcrowding and, if ordinances relative thereto are inadequate, sponsor local remedial legislation.

9. Intensify and coordinate the health education programs now carried on in the City by the various organizations.

10. Coordinate the services of the City Health Department and the medical departments of local industries.

11. Enlarge the North Tonawanda Health Preparedness Committee by the addition of qualified, civic minded professional and lay individuals and then have this Committee consider and promote the foregoing suggestions relating to North Tonawanda in the order of their importance to the health of the City. Refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution, yet are not the responsibility of any specific State department.

The County Outside the Three Cities

1. Promote plans for the postwar construction of a sewer system and sewage disposal plant at Olcott and Lewiston.

2. Finance the County share of the salaries of the public health nurses with County Government funds instead of continuing the present method by which, under an informal agreement, the local share is paid by the several towns and the County Tuberculosis and Public Health Association.

3. Increase the number of public health nurses.

4. Increase the volume of home bedside nursing service done as a part of the public health nursing program.

5. (a) Determine the reason for the abnormally low rate of defects found in the school medical examinations at Barker, Gasport, Lewiston, Middleport and Youngstown, and in School Districts I and II, and take steps to remedy this situation.

   (b) Ascertain the reason for the striking varying proportion of eye defects found among the total defects in the village and rural schools and, if due to a varying quality of examinations, promote an improvement in such examinations.

   (c) Determine the reason for the disproportionate number of nutrition defects found in Lewiston.

   (d) Consummate a greater per cent of treatment of defects in Barker, Lewiston, Middleport, Youngstown and in School District I and III, with special attention to dental defects in Barker, Lewiston and Middleport, to eye defects in Barker and tonsil defects in Youngstown.

6. Determine the cause of the infant mortality rate being higher in the Rural County than in Lockport and North Tonawanda and take steps to lower it.

7. Plan an effective means of securing a greater per cent of diphtheria immunizations among children under five years of age.

8. Improve the general sanitary conditions in the country elementary schools.

9. Intensify and coordinate the health education programs now promoted by various organizations.

10. The Niagara County Health Preparedness Committee should consider and promote the foregoing suggestions relative to the County outside the cities in the order of their importance to the health of the County; and refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution, yet are not the responsibility of any specific State department.

# INTRODUCTION

PURPOSE OF THE REPORT

The purpose of this report is (1) To indicate the health and medical care facilities and services available in Niagara County, evaluate their effectiveness and, on the basis of fact, make suggestions for the improvement of these services. (2) To provide the New York State Health Preparedness Commission with information, enabling it to interpret the local viewpoint and problems and estimate the effect that governmental proposals may have upon the County.

Niagara County, along with Ontario, Seneca and Washington Counties, is being studied at the suggestion of the Advisory Committee on Local Health Preparedness Committees of the Commission. Following the completion of these studies, this Committee will consider the advisability of making similar studies in additional counties.

HEALTH PREPAREDNESS COMMITTEES IN NEW YORK STATE

Health Preparedness Committees were established in 1940 in each of the counties of New York State by gubernatorial directive. They were appointed by the chairmen of the respective county boards of supervisors. Although the directive specified, by name, those local health and medical care agencies that should be represented on such local Health Preparedness Committees, it simultaneously provided for additional optional appointments. Each committee was charged with the responsibility of evaluating and improving the health status of its particular locality, not only for the duration of the war but with a view to the postwar period.

The Commission envisages these County committees as planning and coordinating groups for local health and medical care services which will (1) be aware of the health status of their respective localities; (2) evolve and promote needed programs; (3) delegate, whenever possible, such new programs to existing agencies capable of providing the services; (4) suggest means of curtailing the overlapping of services by two or more agencies; (5) and refer to the State Commission those problems which are of a Statewide nature or defy local solution, yet are not now the responsibility of a specific State department.

HEALTH PREPAREDNESS COMMITTEES IN NIAGARA COUNTY

It has been customary for each of the three cities of Niagara County and the Rural County area to plan and promote its health and medical care programs separately rather than on a Countywide basis. Therefore each of the cities and the Rural County has preferred to establish its own Health Preparedness Committee. The Niagara County Health Preparedness Committee, serving the County outside the three cities, has confined its interest to promoting an adequate Emergency Medical Service, a strictly wartime program. The Niagara Falls City Committee, in general, has served as the advisory committee to the City Health Officer. The North Tonawanda City Committee has assisted with the formation and promotion of the City's Emergency Medical Service. The Lockport City Committee has only recently been formally organized.

SOURCE OF DATA AND METHOD OF PRESENTATION

The data in this report have been assembled from the fiscal, social welfare, public health, medical and hospital reports of local and State agencies, from interviews with representatives of these organizations and from interviews with local individuals engaged or interested in public health and medical care services. The field work for the report was done in May 1944 and the preliminary draft thereof was subsequently edited by a representative local committee prior to publication.

Since each of the three cities and the area outside these cities tends to plan and promote its services independently, every effort has been made to present the situation relative to each of them separately, yet still show the all-over County picture.

# BACKGROUND

HISTORY AND GEOGRAPHY

Niagara County, in the northwestern part of New York State, is bounded on the west by the Niagara River and on the north by Lake Ontario. Formerly a part of the country inhabited by the Seneca Indians, its early history is one of missionaries, fur trading and local skirmishes. Father Daillon, the Recollect Priest and missionary who came to this section in 1626, is reputed to be the first white man to touch the land that now is Niagara County. In the next half century French fur traders visited and later settled in this area. Forts were built at Niagara and LaSalle and the long established native portage at Lewiston came into regular use. The forts were ultimately taken by the British who remained in control until 1796. The County, formed in 1808 from Genesee County, included both the present Niagara and Erie Counties with the present Buffalo City as the county seat. In 1821 Erie County was formed and the present boundaries of Niagara County established. The first major settlements were made in the beginning of the nineteenth century. Growth thereafter was rapid, especially following the completion of the Erie Canal in 1825 which provided a ready access to the eastern markets and centers of population. Today the New York Central and Lehigh Valley Railroads and numerous bus lines operate within the County borders. Niagara Falls City is linked to Canada by frequent boat service and by the Rainbow Bridge which spans the Niagara River from the City to Niagara Falls, Province of Ontario. See Chart 1.

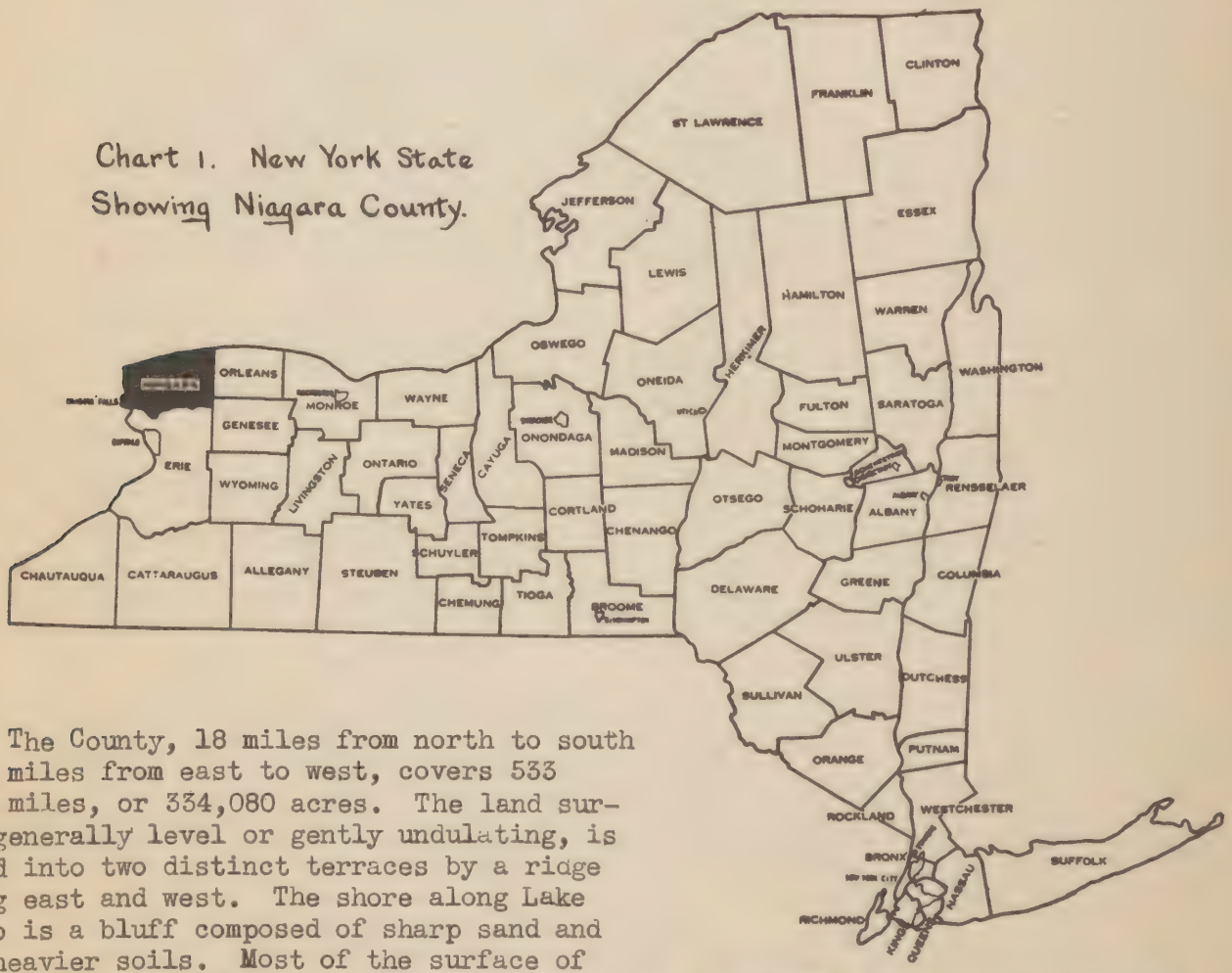



Chart 1. New York State Showing Niagara County.

The County, 18 miles from north to south and 28 miles from east to west, covers 533 square miles, or 334,080 acres. The land surface, generally level or gently undulating, is divided into two distinct terraces by a ridge running east and west. The shore along Lake Ontario is a bluff composed of sharp sand and other heavier soils. Most of the surface of the County is covered with deep deposits of drift. Niagara limestone furnishes an excellent building material and a good quality of lime. The principal quarries are near Pekin, in Cambria Town, and near Lockport City.

GOVERNMENT — Each of the 12 towns, five villages and three cities has its own unit of government. Lockport and North Tonawanda Cities have the mayor and city council form of government while Niagara Falls City has a city manager, mayor and city council. The County Government, centered in the County Board of Supervisors and operating from the county seat at Lockport City, is composed of 42 supervisors, 12 from the towns, eight from Lockport, 15 from Niagara Falls and seven from North Tonawanda. Niagara Falls, with half the 1943 estimated population of the County and paying almost two-thirds of the County taxes, has one-third of the representation on the County Board of Supervisors.

POPULATION — The population has grown from 9,000 in 1810, the year of the first census following settlement, to 160,000 in 1940 and 176,800 in 1943 (estimated). The population of Niagara Falls City has grown from 19,500 in 1892, the year when the Villages of Niagara Falls and Suspension Bridge were consolidated and incorporated as Niagara Falls City, to 78,000 in 1940 and 89,100 in 1943 (estimated). The growth of the City, which so largely influences the size of the County population, has been due to immigration and natural growth rather than annexation of territory. Two-thirds of the County growth in the last twenty years has been due to the growth of Niagara Falls City. See Charts 2 and 3.

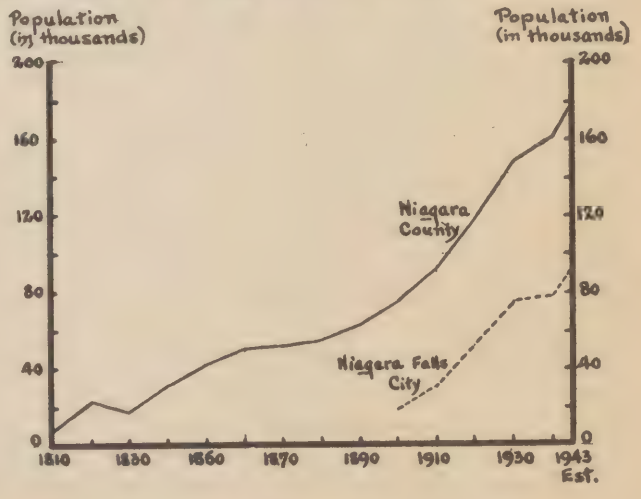
The recent upward trend of population, caused by the influx of industrial workers from adjacent rural areas, Canada and Pennsylvania, to war industries in the three cities, may be temporary. Neither Lockport nor North Tonawanda has ventured a prediction on its postwar population. Niagara Falls estimates that its postwar population will approach 85,100, based on the belief that half of the new industrial workers will return to their former homes and that local men now in military service will return to the City. See Table 18, page 65 .

In 1940 the population was almost entirely white, evenly divided between male and female and one-fifth foreign born. Most of the latter are from Canada, Italy, Poland, England, Germany and Scotland. A large number of other residents are native-born of foreign-born parentage. Three of every four persons live in the cities while the rest reside in the villages and rural district. See Tables 19 and 20, pages 65 and 66 , and Chart 4.

When compared with New York State, exclusive of New York City, Niagara County has a larger proportion of population in the younger, productive age group and a smaller proportion in the older age group. This is due to the number of young industrial workers and their families in Niagara Falls and North Tonawanda, for Lockport and the Rural County have an aging population. However, in the last decade the proportion of County population 45 years old and over has increased. This is significant. It indicates that the County must anticipate caring for a growing number of aged, chronically ill and infirm residents. See Table 21, page 66 , and Charts 5 and 6.

AGRICULTURE AND INDUSTRY — Despite the County's reputation as a fruit-growing center, only a small part of the population is engaged in agriculture. In 1940, half the employed residents were working in industry and, With the increase of war contracts and conversion to war manufacture, this proportion has increased. The remaining residents are

Chart 2. Growth of Population of Niagara County, 1810 - 1943, and Niagara Falls City, 1900 - 1943.



# Chart 3. Percent Change in Population of Niagara Falls City, by Districts, 1920 – 1940.

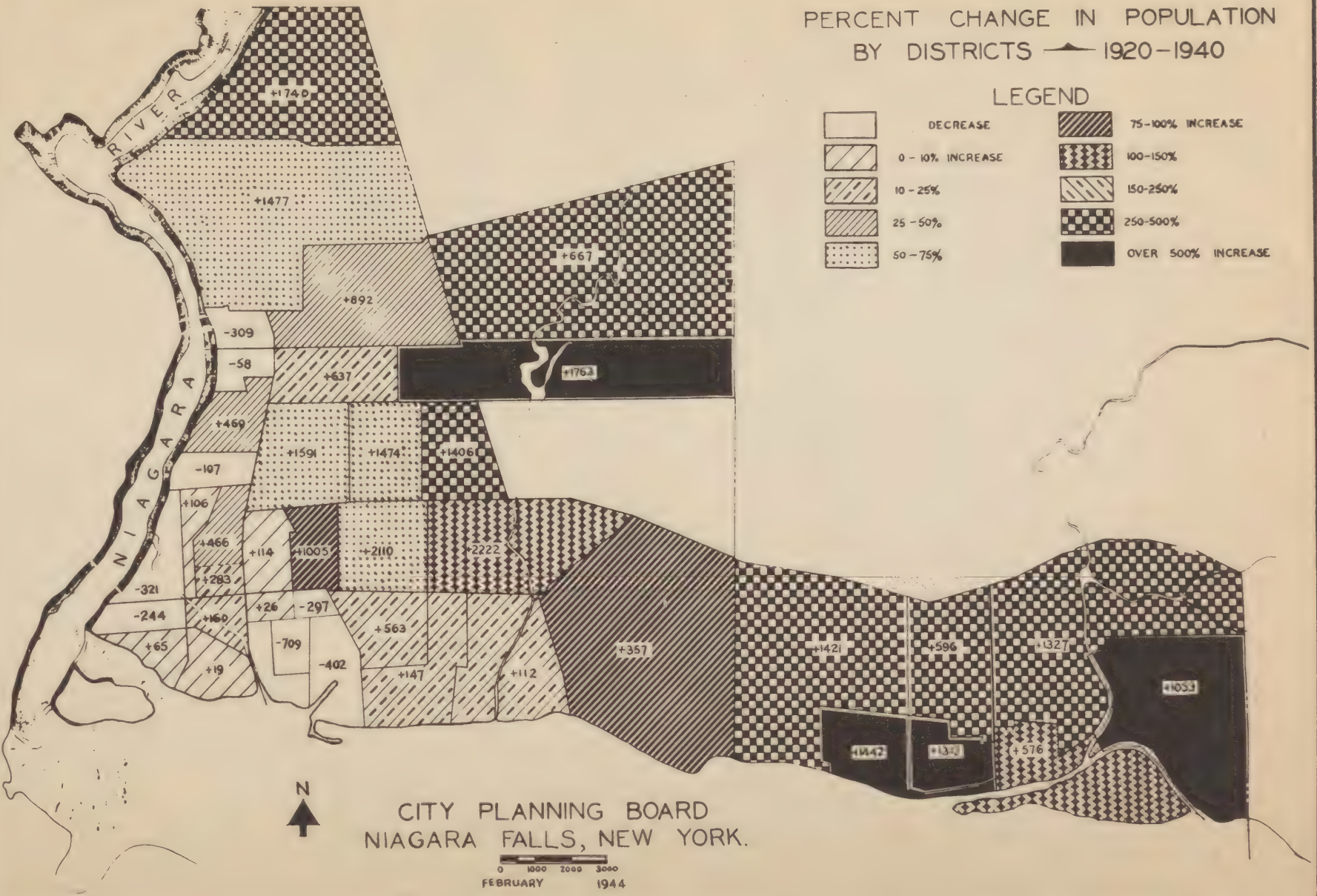
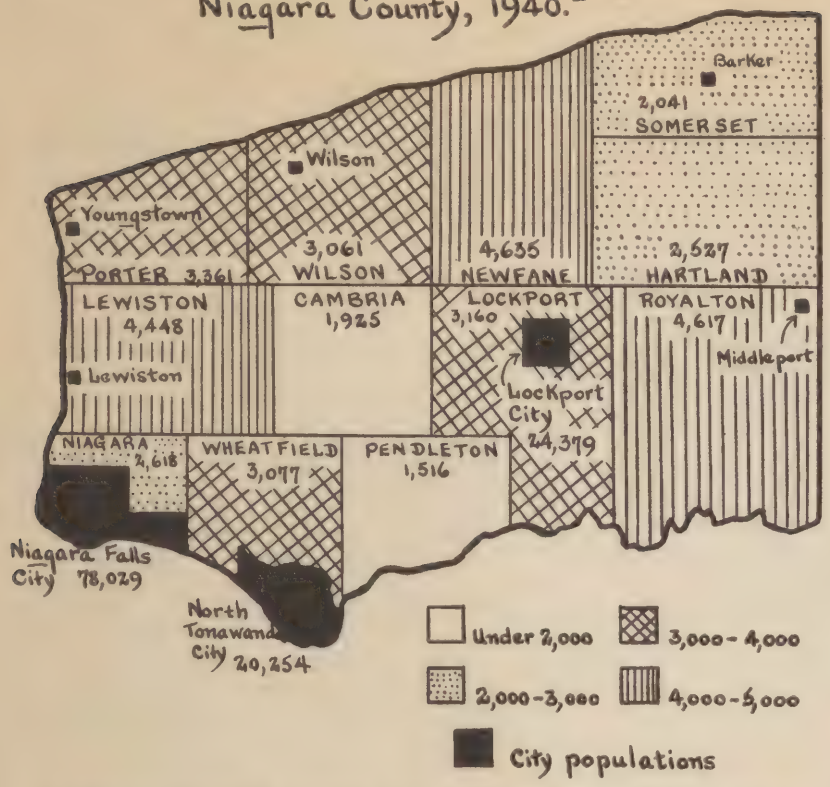


Chart 4. Population of Cities and Towns, Niagara County, 1940.1/




1/ Total population of County in 1940 was 160,110. Estimated population on July 1, 1943, of County was 176,799; of Niagara Falls 89,133; of Lockport 25,328; and of North Tonawanda 21,395.

employed in merchandising trades, domestic service, transportation, the professions and domestic service - occupations necessary to the maintenance of the industrial workers - communication, the reception of raw materials and the shipment of manufactured products. See Table 22, page 66 and Chart 7.

Niagara Falls with cheap electricity made from natural waterpower, produces airplanes, abrasives, storage batteries, carbons, chemicals, metal alloys, paper and breakfast food. Lockport manufactures radiators, plastics, cotton batting, textiles and canned goods; North Tonawanda, which is an extension of the Buffalo industrial area, produces boats, landing barges, paper, plastics, chemicals and steel and iron commodities. Many are making their customary products but for war purposes. Others have been converted to strictly military manufacture. It is the local consensus that after the war the plants will revert from a 48 to a 40 hour week. Many plants will be able to continue the production of their regular commodities but for civilian, peacetime buyers instead of the armed forces. Other plants will have to convert before peacetime production can be resumed.

In 1940 three -fourths of all the land was occupied by the 3,871 farms in the County. A typical farm consisted of 71 acres, with two-thirds of the acreage in fruit, hay and grain. The major farm income was from crops and livestock products.

Chart 5. Per Cent Distribution of Population by Age Groups, Niagara County and Upstate New York, 1940.

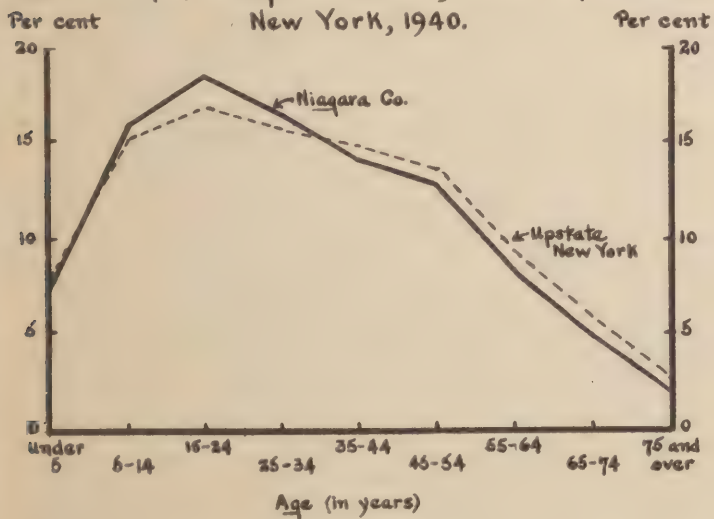
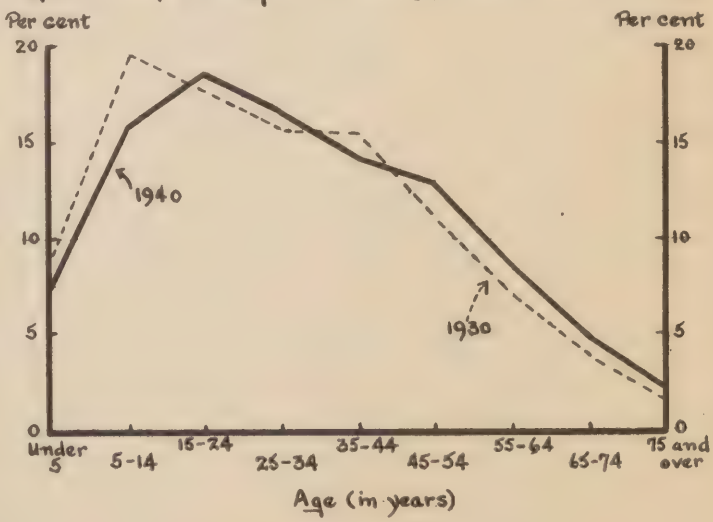



Chart 6. Per Cent Distribution of Population by Age Groups, Niagara County, 1930 and 1940.



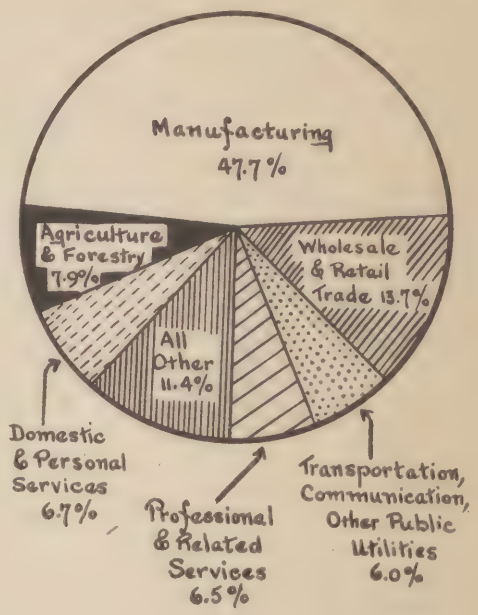
COUNTY ORGANIZATION

The Niagara County Tuberculosis and Public Health Association is a Countywide, health promotion organization and the County Tuberculosis Sanatorium a Countywide health facility. The other local organizations are not Countywide in nature. For example: The County Public Health Committee and the Farm Bureau confine their interest to the rural area. The Red Cross activities of North Tonawanda are a part of the Erie County program while the Chapters at Niagara Falls and Lockport serve the rest of the County. Similarly, War Council activities have been organized separately for each of the three cities and the rural district.

IMPACT OF WAR

The entire County has felt the impact of war. The younger men are in service. Some men and women from the farms are working in the cities. Many farms are neglected or their production reduced. The cities have had acute housing shortages. Hospitals are overcrowded. Transportation facilities are overtaxed. North Tonawanda and Niagara Falls are having a boom.

Chart 7. Distribution of Gainfully Employed Persons, 14 Years Old and Over, by Industrial Groups, Niagara County, 1940.



# FACILITIES

The prevention of illness and the treatment of sick persons depend upon hospitals, laboratories, clinics and accessible stores of medical supplies, as well as on personnel trained in public health and care of the sick. These concentrations of equipment and supplies are the facilities which the physicians, dentists, nurses, sanitarians and laboratory technicians must have in order that they may provide a good quality of service. They are a means of distributing overhead costs over a number of patients. They make available to the average citizen the possibility of superior medical care at a reasonable cost.

In Niagara County the medical care facilities are concentrated in the three cities where a large proportion of the population lives. Individuals residing in the villages and on the farms go to the cities nearest them for hospital, clinic and laboratory services. Because Lockport is situated in the midst of a farm district, its facilities are more extensively used by the rural residents than are those of Niagara Falls and North Tonawanda.

GENERAL HOSPITALS

There are four general hospitals in the County, two of which are municipal hospitals for which the respective cities underwrite any deficits incurred. They are not "municipal hospitals" in a narrow sense, but admit patients of all economic classes, including those unable to pay for care. Although Mount St. Mary's and Memorial Hospitals at Niagara Falls are approved by the American College of Surgeons, none of the hospitals in the County are approved for residencies or training of internes. Only Mount St. Mary's Hospital has an accredited school of nursing.

There are now 545 beds and 139 bassinets in these four hospitals. From 1941 to 1943 the number of beds has been increased 8.7%; admissions, exclusive of newborn infants have increased 12.8%; and the occupancy rate has declined. The larger number of admissions is attributed to the augmented population, improved economic conditions, growth of the Blue Cross Hospital Service Plan and the rising birth rate. See Chart 8 and Tables 1 and 2.

Table 1. Auspices, Capacity and Occupancy of General Hospitals in Niagara County, 1941 and 1943. 1/

| Location and name | Auspices | Number of beds | | Per Cent occupancy of beds | |
|---|---|---|---|---|---|
| | | 1941 | 1943 | 1941 | 1943 |
| Total | | 507 | 551 | 90.5 | 84.4 |
| Lockport | | | | | |
| Lockport City Hospital | City | 120 | 142 | 100.8 | 90.2 |
| Niagara Falls | | | | | |
| Mt. Saint Mary's Hospital | Church | 170 | 188 | 84.7 | 79.2 |
| Niagara Falls Memorial Hospital | Non-profit Asso. | 166 | 166 | 92.2 | 96.4 |
| North Tonawanda | | | | | |
| DeGraff Memorial Hospital | City | 51 | 55 | 80.4 | 69.1 |

1/ Adapted from HOSPITAL SERVICE IN THE UNITED STATES, American Medical Association, 1942 and 1944.

Table 2. Per Cent Change of Admissions to General Hospitals of Niagara County, 1941 and 1943. 1/

| Hospital | Total admissions | | Per cent change 1941 to 1943 |
|---|---|---|---|
| | 1941 | 1943 | |
| Total | 17,273 | 19,488 | + 12.8 |
| Lockport City Hospital | 3,508 | 4,171 | + 18.9 |
| Mt. Saint Mary's Hospital | 5,558 | 5,864 | + 5.5 |
| Niagara Falls Memorial Hospital | 5,697 | 6,899 | + 21.1 |
| DeGraff Memorial Hospital | 2,510 | 2,554 | + 1.8 |

1/ Adapted from HOSPITAL SERVICE IN THE UNITED STATES, American Medical Association, 1942 and 1944.

Bed capacities are limited and staff nurses at a premium. Consequently the hospitals have given priority to the admission of seriously ill persons and those requiring major surgery and have deferred cases requiring minor surgery and those wherein delays will not greatly endanger health. With few exceptions, chronically ill patients are not admitted to the hospitals.

The Niagara Falls Memorial Hospital has 100 and DeGraff Memorial Hospital 61 beds recently built with Lanham Act federal funds. None have been opened because of the nursing shortage.

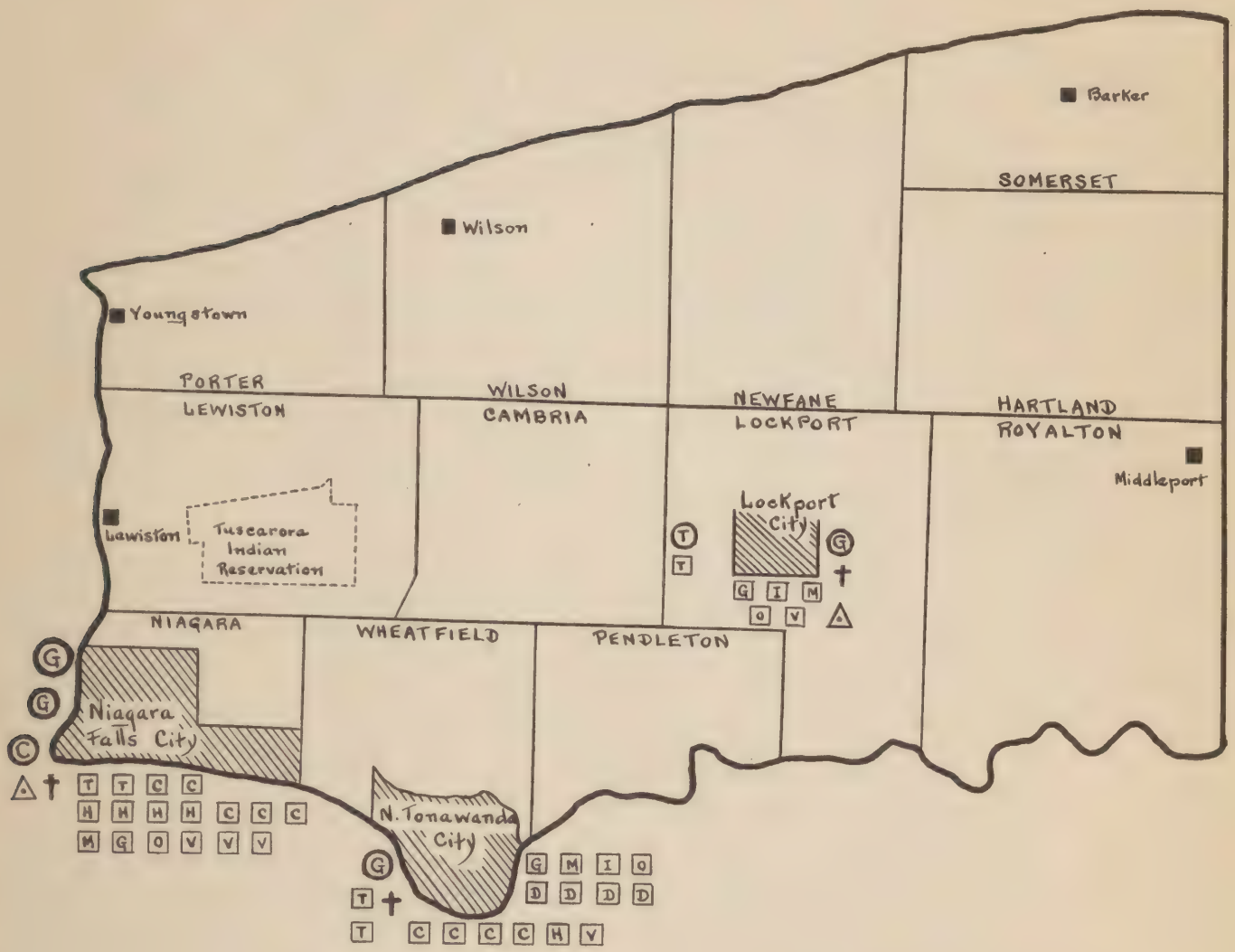
In general, the hospitals serve only the County. However, Lockport City Hospital admits a few patients from northeastern Erie County and northwestern Genesee County. One-quarter of the DeGraff Memorial Hospital patients are from Tonawanda just across the County line in Erie County. Some persons from the eastern portions of the County use the general hospitals in Albion and Medina in Orleans County. Residents also use the hospitals and specialists in Buffalo, Rochester and the State Institute for Malignant Diseases at Buffalo when either specialized therapy or surgery, not available in their immediate vicinity, is required.

SPECIAL HOSPITALS

The Niagara Falls Municipal Hospital at Niagara Falls and the Niagara Sanatorium outside Lockport are special hospitals. The former is an isolation hospital admitting communicable disease cases from the City and, in emergency cases, chronically ill and medically indigent patients. It has 32 beds and frequently operates at half capacity. In the summer months the hospital sometimes has but six cases, making it administratively difficult to retain a competent, continuing staff and, because of fluctuating occupancy, the average overhead per diem cost per patient is high.

The Sanatorium offers two types of service. (1) It provides in-patient and clinic service for resident tuberculosis cases and, in addition, admits some tuberculosis cases from neighboring counties. (2) It also serves as a county children's hospital for medically indigent children who are rheumatic, cardiac or diabetic cases or cases of upper respiratory infection needing hospital care. If these children were not accepted for care, the only alternative place for their hospitalization would be the County Home Infirmary. Such cases are cared for in the children's building which was built at a time when the

# Chart 8. Location of Hospitals, Approved Laboratories, Supply Stations and Clinics, Niagara County, 1944.




- (C) Communicable disease hospital
- (G) General hospital
- (T) Tuberculosis sanatorium
- † Supply station
- △ Approved laboratory

- [C] Health class or conference
- [D] Dental hygiene (prophylaxis) clinic
- [G] Child guidance clinic
- [H] Child health and immunization clinic
- [I] Immunization clinic
- [M] Mental hygiene clinic
- [O] Orthopedic clinic
- [T] Tuberculosis (or chest) clinic
- [V] Venereal disease clinic

need for care of tuberculous children was thought to be much greater than has been the case. Recently 46 beds in this building were closed, reducing the capacity of the hospital from 225 to 179 beds. This curtailment, caused by a shortage of nurses and physicians, has necessitated limiting admissions to active tuberculosis cases and to a few non-tubercular, medically indigent cases of children hospitalized at the expense of the County Department of Public Welfare. The demand for admission of the latter type of patient has declined, apparently due to improved economic conditions, but may increase again if physicians demand free hospitalization for these types of child patients.

In 1943 the per cent occupancy of the Sanatorium was 78%, a low rate for a chronic service. The decrease in patients has been in child patients, not in adult patients. With good personnel policies and proper, medically sound assignments of improved patients to institutional maintenance positions, the Sanatorium has maintained its high standard of care despite the shortage of nurses and the wartime competition of local industries for manpower. All tuberculous patients requiring hospitalization are being admitted and their length of stay has not been reduced.

NURSING HOMES AND COUNTY HOME INFIRMARY

There are seven nursing homes 1/ but no maternity homes in the County. The former are reputed to be of good quality and are used extensively to care for chronically ill and infirm persons. Seventy-five of the 300 beds of the County Home comprise the Infirmary whose patients usually are infirm and chronically ill patients unable to pay the $18 - $25 per week fees of the nursing homes. Care in the Infirmary is provided by three registered nurses, practical nurses, an orderly and a physician who is on call. It also provides limited acute hospital service and is approved by the State Department of Social Welfare for minor surgery, but not for deliveries.

CLINICS

None of the hospitals operates an out-patient service. The clinics in the County, concentrated in Niagara Falls and North Tonawanda, confine their services to the prevention of disease and teaching individuals to keep well. Regularly scheduled immunization, orthopedic, venereal disease, tuberculosis, mental hygiene and child guidance clinics are held in the three cities. Child health clinics meet in Niagara Falls, dental prophylaxis clinics in North Tonawanda and in both cities nurses conduct health conferences for mothers and pre-school children. The only clinics held outside the cities are occasional immunization clinics conducted by the local health officers in their respective jurisdictions. See Table 23, page 67.

LABORATORIES AND SUPPLY STATIONS

The three laboratories in the County share the same director who, in addition, is engaged in the clinical practice of medicine. The laboratories of the Niagara Falls Bureau of Health and Lockport City Hospital are approved units. The one at the Niagara Sanatorium is not approved as the more recent regulations of the State Department of Health, which post-date the approval of the two other units, require that a laboratory director serve on a full-time basis. The Supply Stations in the three cities are open at all times to provide physicians with biologicals free of charge.

POSTWAR CONSTRUCTION

New York State, through its Postwar Public Works Planning Commission, has invited the counties and municipalities to submit plans for postwar construction of public works. Such projects, if approved, might be built at joint local and State expense, possibly with federal aid. As of July 1, 1944 the Planning Commission had approved a construction program for Niagara County estimated to cost $1,400,488, including the following medical and health-related projects: 2/

---

1/ Lockport 2, Niagara Falls 2, Wilson 1, Rural County 2.

2/ See APPROVED STATE AND MUNICIPAL PROJECTS; New York State Postwar Public Works Planning Commission; July 1, 1944; pages 48 and 49.

Chart 9. Locations of Municipal Hospital and Health Centers Planned for Postwar Construction, Niagara Falls City.

| Project | Estimated Cost |
|---|---|
| Niagara County | |
| Extension and improvement of County Infirmary | $150,000 |
| Lockport City | |
| City Hospital Nurses' Home | 134,331 |
| Auxiliary water supply pumping station | 75,000 |
| Extension of water distribution system | 318,157 |
| Extension of trunk sewer system | 300,000 |
| Wilson Village | |
| Remodeling sewage treatment plant | 30,000 |
| Total | $1,007,488 1/ |

The improvements at the County Home Infirmary call for the construction of a new 125-bed Infirmary and the conversion of the present 75-bed infirmary to nurses' quarters. Therefore there will be a net gain of only 50 beds for use of infirm and chronically ill patients.

Niagara Falls City is processing plans for a new $500,000, 100-bed municipal hospital for communicable disease, chronically ill and some acutely ill, medically indigent cases. The offices of the City Bureau of Health will probably be removed to this building. In addition, the City is planning to construct six health centers geographically distributed in conformity to concentrations of populations. These Centers will house the clinics, health classes and health conferences serving residents in the surrounding neighborhoods. See Chart 9.

1/ In addition, plans have been approved for the construction of 24 bridges ($253,000), rest rooms and a pier at Krull Park ($15,000) and classrooms in Central School District #1 ($125,000).

# SERVICES

Health and medical care services are twofold: (1) Preventive medicine, usually called public health, is aimed at keeping people well, preventing the spread of infectious diseases and attacking some non-infectious diseases in their early stages to obviate serious illness and future physical and mental handicaps. Preventive medicine is the joint responsibility of the private practitioner in making early diagnoses, advocating and initiating prompt treatment and advising adequate nutrition, and of the health officer in promoting good sanitation and enforcing quarantine regulations. (2) Curative medicine is designed to alleviate persons already ill. These two types of medical care are closely related but are described separately in this report as a practical means of presentation.

## Public Health

ADMINISTRATION AND SUPERVISION

The public health service in Niagara County is provided by varying administrative auspices in each of the three cities and the Rural County. In the rural district the local, part-time health officers, usually practicing physicians, of the 12 towns and five villages are appointed by their respective local boards of health and must possess qualifications specified in the State Sanitary Code. Among other things, they enforce the Code relative to communicable diseases; eliminate public health nuisances; and cooperate with the District State Health Office of the New York State Department of Health in controlling tuberculosis and communicable disease, safeguarding the milk and water supply, insuring adequate sanitation and promoting health education. In addition, the District Office provides supervisory and consultative service for the six Rural County public health nurses. See Table 3.

The County Public Health Committee considers and makes suggestions for the maintenance of good standards of public health, especially relative to the work of the rural public health nurses, and promotes health committees in the towns. The present Committee consists of:

Mr. C. Warren Silsby, Chairman
Member, County Board of Supervisors.... R.D. #1, Gasport
Mr. Benjamin L. Rand, Secretary
County Tuberculosis and Public
Health Association ..... North Tonawanda
Dr. Arthur N. Aitken,
Director, Niagara Sanatorium ..... Lockport
Mr. Herbert Baker,
Member, County Board of Supervisors ... Sanborn
Dr. Frank O. Cole,
Local health officer ..... Gasport
Miss M. Gazelle Hoffman,
District Superintendent of Schools .... Lewiston
Dr. Ralph S. Pickett,
Local health officer ..... Olcott
Mr. Milton E. Switzer,
County Commissioner of Public Welfare.. Lockport

Dr. A.S. Dean, District State Health Officer located in Buffalo, and Miss May Chitwood, Assistant State Supervising Public Health Nurse for Niagara County who is located in Lockport, attend the Committee meetings.

Table 3. Administrative Auspices Providing Public Health Services in the Areas of Niagara County, May 1944.

| Service and Auspices | Lockport | Niagara Falls | North Tonawanda | Rest of County |
|---|---|---|---|---|
| Official public health service (local) | | | | |
| City health department ..... | x | x | x | |
| Town and village health officers (rural service and immunization clinics) | | | | x |
| County Public Health Committee (County public health nurses)..... | | | | x |
| Niagara Sanatorium (tuberculosis hospitalization & clinic) | x | x | x | x |
| District State Health Office | | | | |
| General supervision, consultation ..... | x | x | x | x |
| Orthopedic clinics ..... | x | x | x | |
| Milk and water sanitation | | | | |
| Supplementing local service..... | x | x | x | |
| Assuming major responsibility ..... | | | | x |
| Voluntary public health service | | | | |
| American Red Cross (home visiting nurses) | | x | x | |
| School health service | | | | |
| City department of education ..... | x | x | x | |
| School Trustees (rural school physicians) | | | | x |
| County Public Health Committee (rural public health nurses)..... | | | | x |
| Mental hygiene | | | | |
| State Department of Mental Hygiene | | | | |
| Mental hygiene clinic ..... | x | x | x | |
| Child guidance clinic ..... | x | | x | |
| Beman Foundation (child guidance clinic) | | x | | |
| Industrial health | | | | |
| Medical departments of industries ..... | x | x | x | |
| Other | | | | |
| County Tuberculosis & Public Health Asso. | x | x | x | x |

In Lockport, Niagara Falls and North Tonawanda the city health departments provide the services which the health officers and public health nurses carry on in the rural districts.[1] All are under the general supervision of the State Department of Health and, with the exception of Niagara Falls, rely on the District Office for technical services.

The medical inspection programs for public school pupils in the cities are administered by the local Departments of Education and in the rural areas by the School Trustees. The parochial school medical inspections are the responsibility of the city health departments in Niagara Falls and North Tonawanda and of the City Department of Education in Lockport. Part-time school physicians serve Lockport, North Tonawanda and the rural

1/ Lockport and North Tonawanda have Boards of Health to which their respective part-time city health officers are responsible. The full-time Health Officer of Niagara Falls is responsible to the Mayor and City Manager

district while Niagara Falls has both full and part-time school physicians. Full-time school nurses serve the cities while the rural school nursing is done by the County public health nurses, in addition to their other duties. Wherever the program is under the jurisdiction of a department of education, the medical personnel is responsible to school superintendents and principals under the general supervision of the State Department of Education.

PERSONNEL The professional and technical aspects of public health service, exclusive of the resident staffs of Niagara Sanatorium and Niagara Falls Municipal Hospital, are carried on by the personnel shown in Table 4.

Table 4. Professional Personnel Providing Public Health Services in Niagara County, May 1944.

| Personnel | Lockport | Niagara Falls | North Tonawanda | Rest of County |
|---|---|---|---|---|
| Official public health service | | | | |
| Health officers, full-time | | 1 | | |
| part-time | 1 | | 1 | 11 1/ |
| Public health nurses, full-time | 1 | 12 | 2 | 8 2/ |
| part-time | | | | 1 3/ |
| Physicians, part-time (Special clinics and services) | 1 | 2 | 1 | |
| Laboratory personnel | | | | |
| Director, part-time | 1 | 1 | | |
| Bacteriologist, full-time | | 1 | | |
| Inspectors, full-time | 1 | 5 | 1 | |
| School health service | | | | |
| Physicians, full-time | | 1 | | |
| part-time | 1 | 3 4/ | 2 | Varies |
| School nurses, full-time | 3 | 8 5/ | 2 | 6/ |
| Dentists, part-time | | 2 7/ | 1 | |
| Dental hygienists, full-time | | 2 8/ | | |
| part-time | 1 | | 2 | 2 9/ |

1/ Serve 17 rural districts. Some serve more than one district.
2/ Six County public health nurses, one supervisor, one Sanatorium nurse.
3/ Nurse serving part-time at Tuscarora Indian Reservation.
4/ One employed by Health Bureau for parochial school inspections
5/ One employed by Health Bureau for service to parochial schools.
6/ Service provided by County public health nurses noted above.
7/ Employed by Health Bureau.
8/ In addition, one dental assistant is employed by City Department of Education.
9/ One dental hygienist shared by schools of Newfane and Wilson, other serves school at Barker.

In addition, the District State Health Officer, his assistants, the District State Milk Sanitarian and Sanitary Engineer provide continuous service in Lockport. North Tonawanda and the Rural County.

SERVICES The public health services in all sections of the County are carried on by a number of local and State official and voluntary agencies. Their teamwork influences the extent and quality of their mutual goal, good community health.

Since the public health nurses play a major role in the service, it is important that their responsibilities be understood. In general, the duties of these generalized nurses are: (1) Visit families to assist in supervising their health, teach bedside nursing, urge attendance at clinics for appropriate cases, advise prompt medical care for ill persons, assist in carrying out recommendations of clinics and physicians, instruct families in the prevention of disease and assist private practicing physicians with obstetrical and pediatric cases receiving care under the Emergency Maternity and Infant Care Program. (2) Assist with the administrative details of the clinics. (3) Promote the organization of health education groups and teach classes in cooperation with civic agencies and the District State Health Office. (4) Serve on committees with health interests.

Many of the public health services emanate from, or are closely allied with, the clinics whose locations are indicated in Table 5 and on Chart 8 and, in more detail, in Table 23, page 67.

Table 5. Public Health Clinics, Classes and Conferences in Niagara County, May 1944.

| Clinics, classes, conferences | Lockport | Niagara Falls | North Tonawanda | Rest of County |
|---|---|---|---|---|
| Child health & immunization clinics | | 4 | 1 | |
| immunization only | 1 | | 1 | Periodic |
| Child guidance clinics | 1 | 1 | 1 | |
| Classes for expectant mothers | | 2 | | |
| Dental hygiene (prophylaxis) clinics | | 2/ | 4 3/ | |
| Mental hygiene clinics | 1 | 1 | 1 | |
| Nurse-parent conferences | | 3 | 4 | |
| Orthopedic clinics | 1 | 1 | 1 | |
| Tuberculosis clinics | | | | |
| Chest x-ray only | | 2 | 2 | |
| Complete service | | | | 1 1/ |
| Venereal disease clinics | 1 | 3 | 1 | |

1/ Four afternoons a week at Niagara Sanatorium.

2/ Provided as part of the school medical service.

3/ Held in connection with the nurse-parent conferences.

(1) Communicable disease.

Tuberculosis. The case finding and hospitalization of tuberculosis cases is the joint responsibility of the three city health departments, the County public health nurses, Niagara Sanatorium and its clinic, private practitioners and the medical departments of industries. Positive cases are most often located by examination of contacts of known active cases, pre-induction examinations by the Selective Service Boards and mass x-ray examinations of industrial groups. The latter usually are financed by the employers.

Patients in the vicinity of Niagara Falls and North Tonawanda are examined in the chest x-ray clinics in these cities; all others use the clinic at Niagara Sanatorium which meets four afternoons a week. Practically all patients admitted to the Sanatorium are first examined thoroughly at the latter clinic.

If hospitalization is recommended, County patients are admitted to the Sanatorium, only a few residents going to State Tuberculosis Hospitals. No means test is applied and care is free unless patients personally state their ability to pay. The Sanatorium emphasizes early and accurate diagnosis, collapse therapy when indicated and rehabilitation initiated shortly after admission.

Although collapse therapy is in general use in many tuberculosis sanatoria, the Niagara Sanatorium's rehabilitation program is relatively unique. "The objective is immediate occupational therapy treatment for the individual during enforced leisure and, when practicable, to prepare the patient for eventual (financial)independence. Prescribed occupational therapy is used in its broadest scope during the period of rest therapy; educational, including completion of high school subjects, and prevocational courses being used as well as diversional activities and handicrafts. It is continued throughout the period of physical readjustment and includes activities designed to increase work tolerance and for vocational rehabilitation. Through it, assistance is given in making social adaptations, cultural development and recognition of civic responsibilities." 1/ Patients are classified on the basis of their physical capacity, progressing from strict bed rest (Class A) to performing unlimited work and becoming candidates for job placement (Classes G and H) either on the Sanatorium payroll or outside the institution. Morale has been improved, homesickness reduced, skills acquired, earning capacities promoted and patients trained for appropriate employment.

Cases discharged from care and suspected contacts of known cases are visited by the public health nurses to insure their return to clinics for periodic check-ups and their adherence to medically recommended regimen. The nurses of the three city health departments follow up city cases while the public health nurse of the Sanatorium serves the rural district.

The County operates a health camp, or preventorium, each summer to rehabilitate undernourished and underprivileged children. Although the project historically stems from the desire to prevent tuberculosis, it is not affiliated with the Niagara Sanatorium. Expenditures for the camp, reported in the County Department of Public Welfare fiscal account instead of as a public health service, are met in part by State aid funds.

Venereal disease. In addition to treatment by practicing physicians, venereal disease clinics are held in the cities while the rural health officers treat cases in their jurisdiction, at public expense if necessary. The field work is done by the public health nurses within their respective jurisdictions. In recent years industrial plants in the cities have referred known cases among their employees to the local health departments for follow-up and treatment.

Immunization and vaccination. Diphtheria immunization and vaccination are available through private physicians, the regularly scheduled immunization and vaccination clinics in the cities and the occasional clinics conducted by the health officers in the Rural County. Since vaccination for school children is mandatory by State law only in cities of 50,000 or more population, it is optional in all Niagara County except Niagara Falls City.

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1/ Aitkin, Arthur N., M.D., Director of Niagara Sanatorium, THE REHABILITATION SERVICE OF THE NIAGARA SANATORIUM, ITS ORGANIZATION, PROGRESS AND RESULTS, May 1944.

(2) Maternal and Infant Welfare.

Maternal and infant welfare service varies from locality to locality. Lockport and the rural district have no clinics while Niagara Falls has weekly child health clinics and North Tonawanda child health, immunization and dental prophylaxis clinics. The two latter cities also promote child health supervision through nurse-parent conferences and Niagara Falls has two classes for expectant mothers. Private physicians provide pediatric service and have major responsibility for obstetrical care.

(3) Orthopedic Service.

Orthopedic clinics, sponsored and staffed by the State Department of Health, are held at least quarterly in the cities, serving both urban and rural cases. Public health nurses assist in the organization of these clinics, the referral of cases and follow-up. Additional cases are seen by practicing physicians. Children's Courts in the County allocate funds for treatment, including surgery, and appliances recommended for children unable to pay for such items.

(4) Mental Health.

Child guidance and mental hygiene clinics are held in the cities, the frequency thereof depending on demand. The child guidance clinic in Niagara Falls is conducted and financed by the Beman Foundation while those in Lockport and North Tonawanda are under the auspices of the State Department of Mental Hygiene. In addition, patients are seen by private practitioners.

(5) Sanitation.

Neither the cities nor the County Government employ sanitary engineers or milk sanitarians. The city health departments make routine plumbing, milk and water inspections and carry on sanitary services within their competency. The supervision of the milk and water sanitation in the County, especially the technical aspects, is done by the District State Sanitary Engineer and the District State Milk Sanitarian in cooperation with the local health officers. Although Niagara County is large enough to justify the employment of a milk sanitarian, such a proposal has never been acted upon locally.

The District State Sanitary Engineer supervises all water supplies, sewage disposal plants and camps. The 88 camps, mostly tourist camps along Niagara Falls Boulevard, are inspected annually. The specific local situations relative to water supply and sewage disposal are as follows:

Barker has no public sewage disposal system but also no water pollution. If the local canning industry is to grow, a public system may be necessary.

Lewiston water is from the Niagara Falls City water supply. There is no sewage system or treatment plant.

Lockport City water supply is from Niagara River, conducted by a 14 mile pipeline. Because of the age of this pipeline, the City plans postwar construction of an emergency pumping station along the Erie Canal to pump water directly into the filter plant. Additions are planned to the water distribution system and sewage disposal plant.

Middleport water supply is satisfactory. It has a sewage disposal plant which will ultimately need modernization.

Newfane has a satisfactory water supply and sewage disposal facilities.

Niagara Falls City water supply is from two intakes in Niagara River and is pumped and filtered satisfactorily. Occasionally industrial residues (phenol compounds) contaminate the water and, although imparting an objectionable taste, are not harmful. If the present attempt to correct this by chemical treatment is unsuccessful, the City will consider abandoning one intake main and extending the other into the unpolluted Emerald Channel of Niagara River. Sewage disposal in the City is satisfactory except for some untreated drainage into Cayuga Creek and Niagara River. Steps are being taken to eliminate this latter defect.

North Tonawanda City sewage is now drained untreated into Niagara River. An attempt was made to correct this by proposing WPA construction of a sewage treatment plant, a project which never materialized. The City has no reserve water supply and is therefore considering the construction of an elevated storage facility.

Olcott has private sewage disposal methods which have created a nuisance condition and aroused complaints. The postwar construction of a sewer system and disposal plant are contemplated.

Ransomville water is from the Niagara Falls City water supply.

Youngstown water is from the Niagara Falls City water supply. Its sewage system is satisfactory.

Wilson has a public water and sewage system. The latter will ultimately require modernization.

(6) Laboratory Service.

Adequate, conveniently located and technically competent laboratories to do tests, analyses and microscopic examinations for practicing physicians and hospitals are requisites for the scientific practice of medicine and prompt, accurate diagnoses. The approved laboratory at Niagara Falls, which receives State aid, is part of the City Health Bureau while the approved laboratory at Lockport, which does not receive State aid, is a service of the City Hospital. Both are public facilities. The laboratory at the Niagara Sanatorium is an intramural service.

(7) Health Education.

The physicians, public health nurses, city health departments, public schools, County Tuberculosis and Public Health Association, Red Cross Chapters and medical departments of industrial plants carry on separate, uncoordinated health education programs. Sound films, talks, pamphlets, press releases, posters and individual instruction are used. The audiences are usually civic, church, school or industrial groups.

(8) School Health.

The school medical inspection program consists of examining each school child annually, noting defects and completing individual records as required by the State Department of Education.1/ Parents are notified of defects found and are urged to have them treated. School nurses in the three cities assist the examining physicians and help parents in effectuating treatment of defects. The County public health nurses serve the rural schools.

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1/ Niagara Falls, now examines half the school population annually, achieving a full coverage every biennium. This is an emergency measure occasioned by a wartime medical personnel shortage.

(9) Industrial Health.

Two of the industrial plants employ full-time and some others part-time physicians. These assisted by full-time industrial nurses ascertain the physical fitness of applicants for employment, treat emergency cases of injury or illness in the plants, teach first aid and health education classes, handle compensation cases and act as liasons between the plants and practicing physicians, hospitals and public health services.

## Medical and Dental Care

HOW PROVIDED — On the whole the residents rely upon local medical personnel and facilities for care although some go to Buffalo and Rochester when specialized treatment and surgery, not available in the County, are required. Medical and dental service are provided by private physicians and dentists in cooperation with the hospitals, their staffs, private duty nurses, home visiting nurses, clinics and laboratories.

In Niagara Falls the local chapter of the American Red Cross offers home bedside nursing care, supplementing the service of the practicing physicians. This service is available to employees of industrial plants contracting for the service, to policy holders of insurance carriers contracting for the service, to other individuals able to pay a fee and to still other residents free of charge. A similar service in North Tonawanda is restricted to coverage available through one part-time nurse. No service exists in Lockport and that in the Rural County is limited to the care which can be given by the County public health nurses, in addition to their other duties.

Two groups in the population receive medical care through special programs, upon request. (1) The care of the medically indigent is provided by the County and city departments of public welfare and the town welfare officers. (2) The Emergency Maternity and Infant Care Program, sponsored and paid for by the Federal Government, provides prenatal medical and hospital maternity care for the wives, and medical and hospital care for the infants (children under one year of age), of servicemen in pay grades 4, 5, 6 or 7. The benefits of this Program are not applicable when available at Army and Navy posts. 1/

THE MEDICALLY INDIGENT — The particular department of public welfare responsible for each medically indigent applicant depends upon the type of case and residence of the applicant as indicated in Table 6. Each department provides care as follows:

Niagara County Department of Public Welfare. Care is provided through private practitioners and existing facilities at specified rates prescribed by the State Department of Social Welfare and known to the local physicians, dentists, nurses, hospitals and vendors. Payments are partially reimbursable by the State Department of Social Welfare. 2/

Lockport City Department of Public Welfare. Care is provided under a local plan approved by the State Department of Social Welfare. 3/ It differs from the County Department of Public Welfare plan in the following ways: (1) The Lockport Department employs a part-time Medical Consultant, a physician, who is responsible for determining medical need as well as the quality, quantity and promptness of service.

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1/ NEW YORK STATE MATERNITY AND INFANT CARE PROGRAM INFORMATION CIRCULAR FOR PHYSICIANS, New York State Department of Health, December 1943.

2/ See ANALYTICAL CHART OF REIMBURSABLE MEDICAL, DENTAL AND NURSING CARE, New York State Department of Social Welfare, July 1943.

3/ See MEDICAL CARE PLAN, Department of Public Welfare, Lockport, N.Y., April 1, 1941.

Table 6. Local Departments of Public Welfare Responsible for Specific Types of Relief Cases, Niagara County, May 1944.

| Type of Case | Public Welfare Department | | | | |
|---|---|---|---|---|---|
| | Niagara County | Lockport City | Niagara Falls City | North Tonawanda City | Town Welfare Officers |
| Home Relief | | | | | |
| Settled in town or city | | x | x | x | x |
| Unsettled | x | | | | |
| Old Age Assistance | x 1/ | x | | | |
| Aid to the Blind | x | | | | |
| Aid to Dependent Children | x | | | | |

1/ For all Old Age Assistance cases except those resident in Lockport City, a separate Old Age Assistance District.

(2) The established rates which are listed in detail are slightly higher.
(3) Specific written approval by the State Department of Social Welfare is not required prior to the initiation of any service.

Niagara Falls City Department of Public Welfare. Provides care under similar conditions to the County Department plan but employs physicians on salary to care for clients instead of allowing clients to choose their own physicians to be paid at listed rates for specified services. The rates are somewhat higher due to local situations.

North Tonawanda City Department of Public Welfare. Provides care on same basis as the County Department.

Although the Niagara County, Niagara Falls City and North Tonawanda City Departments of Public Welfare all base their plans for providing service to the medically indigent on the ANALYTICAL CHART of the State Department of Social Welfare, there are local variations in rates and procedure to meet local situations. These modifications are subject to approval by the State Department of Social Welfare.

Medically indigent residents of the Tuscarora Indian Reservation receive care at the expense of the State Department of Social Welfare.

PAYMENT Payments for service, except for the medically indigent and Emergency Maternity and Infant Care cases, are made by the patients themselves. Some residents meet these costs, especially those for catastrophic illnesses, involving hospitalization and surgery, through group insurance plans, discussed on page 35.

THE MENTALLY HANDICAPPED Mentally ill, epileptic, mentally retarded and mentally defective patients are seen and their conditions diagnosed by private physicians or the mental hygiene and child guidance clinics. If institutional care is recommended, psychotic patients are hospitalized at Buffalo State Hospital, non-psychotic epileptic patients at Craig Colony at Sonyea and the mentally retarded at Newark State School. Patients become State charges upon admission, with payment required from financially able patients or their families.

EMERGENCY MEDICAL SERVICE

Emergency Medical Service, the federal and State sponsored program for casualties resulting from enemy action or sabotage, has units in each of the three cities and another covering the remainder of the County. The service is administered and supervised by local physicians, nurses and hospitals in cooperation with the New York State Health Preparedness Commission. The Service in the Rural County has never been as completely planned or as well drilled as that in the three cities, especially Niagara Falls City. In the latter the organization is intact, protection against gas attacks is being emphasized, current drills are reported as satisfactory and efficient organizations exist in the industries. No decisions have been made as to whether all or any of the four local EMS organizations will continue as peacetime, disaster medical services. Their continuation or abandonment will depend upon the action of the local war councils.

## Manpower

Adequate public health, medical, nursing and dental service depend upon prompt initiation of treatment by competent personnel available in adequate numbers. Today the armed forces and high industrial wages are competing for this limited volume of professional manpower.

PHYSICIANS

In May 1944 there were 126 active physicians in the County, 116 in private practice and 10 serving full-time in the schools, official public health services and industrial medical departments. An additional 51 physicians were in military service. The practicing physicians are, in general, geographically distributed according to population. Ten physicians in private practice and three in military service are certified specialists or fellows. 1/ They are concentrated in Niagara Falls. Some other physicians limit their practice to a specialty and, in addition, County patients visit specialists in Buffalo. See Table 7 and Chart 10.

Table 7. Distribution of Population and Practicing Physicians in Niagara County, May 1944.

| Location | 1943 Population | | Practicing Physicians | |
|---|---|---|---|---|
| | Number | Per Cent | Number | Per Cent |
| Total County | 176,799 | 100.0 | 116 | 100.0 |
| Lockport | 25,328 | 14.3 | 20 | 17.2 |
| Niagara Falls | 89,133 | 50.4 | 61 | 52.6 |
| North Tonawanda | 21,395 | 12.1 | 11 | 9.5 |
| Rest of County | 40,943 | 23.2 | 24 | 20.7 |

1/ In private practice and certified by American Boards of Otolarynology (2), Radiology (1), Surgery (1); additional Fellows of American College of Surgeons (5), American College of Physicians (1). In military service and certified by American Boards of Otolarynology (1), Surgery (1), additional Fellow of American College of Surgeons (1). Tabulation excludes Buffalo specialists now in service who previously had protracted office hours in Niagara Falls.

Chart 10. Location of Private Practicing Physicians, Dentists and Nurses, Niagara County, May 1944.[1]


LEGEND

- ■ Practicing physician
- □ Physician in service
- ● Practicing dentist
- ○ Dentist in service
- ▲ County or city public health nurse
- △ Private agency public health nurse
- △ School nurse
- △ Industrial nurse
- △ Private duty nurse
- △ Hospital staff, other institutional nurse

[1] NOTE: Chart does not include physicians serving on staffs of hospitals, as health officers, as industrial physicians, or as school physicians on a full-time basis. Physicians are indicated by location of practice or office and not place of residence.

DENTISTS Of the 82 dentists in the County, 15 are now in service. The 67 practicing dentists are concentrated in the cities with only three in the rural villages. See Chart 10.

NURSES In May 1944 the County Nursing Council for War Service reported 706 nurses in the County, 556 of whom (four out of every five) were employed either full or part-time. These nurses, quite logically, are concentrated in the cities where the hospitals, industrial plants and most of the population are located. The Nursing Council is encouraging inactive nurses to accept local positions and has almost filled its quota for the armed services. See Table 8.

Although the nurse-manpower situation is approaching stability, nurses are still needed in many capacities. Private duty nurses are almost unheard of. The hospitals have lowered their qualifications for employment of nurses but are still understaffed. This shortage has been alleviated by the use of Nurses Aides, both men and women, but there are not enough to fill the daytime shifts or make possible the opening of the 100 new general hospital beds in Niagara Falls and the 61 in North Tonawanda. The remaining local sources of manpower are women of the leisure group and housewives, who might serve as Nurses Aides in the daytime, and inactive nurses. Some of the latter are physically handicapped while others have demanding home responsibilities. Recruiting public health nurses has been equally difficult. Therefore, the Niagara Falls Health Bureau is employing "supplementary nurses", nurses graduated from accredited schools of nursing who assist the public health nurses with routine duties. Since the only local continuing sources of trained personnel are the nursing schools of Mt. Saint Mary's Hospital at Niagara Falls and those in Buffalo, it is doubtful that the shortage can be adequately relieved in the near future.

OTHER PERSONNEL The County continues to have the services of the Sanitary Engineer and the Milk Sanitarian of the District State Health Office. The laboratories have had personnel changes but have maintained service. The Niagara Falls Health Bureau lost two of its three inspectors in 1943 but managed to replace them. The turnover of maintenance personnel in the hospitals has been great, taxing the patience and ingenuity of the hospital administrators.

Table 8. Distribution of Nurses in Niagara County, by Types of Service, May 1944.

| Type of service | Total County | Lockport | Niagara Falls | North Tonawanda | Rest of County |
|---|---|---|---|---|---|
| Total nurses | 706 | 126 | 449 | 72 | 59 |
| Total inactive nurses | 150 | 31 | 75 | 16 | 28 |
| Total employed nurses | 556 | 95 | 374 | 56 | 31 |
| Public health nurses | | | | | |
| In public agencies | 24 | 1 | 12 | 2 | 9[1] |
| In private agencies | 9 | | 8 | 1 | |
| School nurses | 13 | 3 | 8 | 2 | |
| Industrial nurses | 80 | 16 | 52 | 12 | |
| Hospital staff nurses | 291[2] | 58 | 181 | 34 | 18[3] |
| Private duty nurses | 31 | 8 | 18 | 3 | 2 |
| Student nurses | 90 | | 90 | | |
| Other employed nurses[4] | 18 | 9 | 5 | 2 | 2 |

1/ Includes one nurse working part-time at Tuscarora Indian Reservation.
2/ Includes approximately 60 employed part-time.
3/ Includes 16 nurses on staff of Niagara Sanatorium.
4/ Includes nurses employed in doctors' offices, nursing homes, as technicians, etc.

# EXPENDITURES

The costs of public health and medical care are met by personal payments, insurance premiums, taxes and voluntary contributions. Anyone personally paying for medical, dental, nursing or hospital care; anyone carrying hospitalization or sickness insurance; anyone paying village, town, city, county, school, state or federal taxes; or anyone contributing to voluntary health and medical care agencies is a partner in promoting better health. It is a teamwork job depending not only on facilities, competent personnel and well administered services, but also on the wisdom of the public in using these services promptly and adequately. Having the tools to do the job is not enough. They must be used intelligently.

With the methods of financing so complex, it is difficult to determine the total cost of medical care in any one year. Some indication of cost is the fact that $900,000 was spent in Niagara Falls for hospital care (including care of mental patients) and the official and voluntary public health services in 1938. This sum does not include fees to physicians, dentists and nurses or costs of medical care to city residents treated elsewhere. The expenditure was $11.60 per capita and is known to be an underestimate. Approximately one-third of the money came from patients' fees, one-fifth from public funds and the remainder from miscellaneous sources. 1/

Most of the money spent for medical care in the County is paid by individuals or their insurance companies to physicians, dentists, nurses, hospitals and vendors of drugs, medical supplies and appliances. The amount of these expenditures is not available. However, the costs of the official public health services, the school medical inspection program and care of the medically indigent are known. They are a matter of public record, being financed by tax funds, including State and federal aid monies. The latter are no largess but a return to local residents and industries paying State and federal taxes.

PUBLIC EXPENDITURES

In 1942 the gross governmental expenditure of Niagara County, its towns, villages, cities and schools was $13,154,785, $76.81 for every man, woman and child in the County. Of each dollar spent, $.33 was for public education; $.14 was for public welfare and relief, including care of the medically indigent; $.03 was for official public health services, including expenditures for the Niagara Sanatorium; 2/ and $.50 was for such other items as highways, streets, police protection, maintenance of public buildings and so forth. See Chart 11 and Tables 24 and 25, pages 69 and 70.

Of each governmental dollar spent for these services $.46 was spent by the cities (Niagara Falls $.32, Lockport $.09 and North Tonawanda $.05), $.33 by the schools, $.15 by the County and $.05 by the towns and villages. These funds came from several major sources: one-half from general property taxes, exclusive of school taxes; one-third from the various sources of school funds; one-sixth from "other governmental receipts", i.e. gifts, grants, rents, permits, fines and licenses; and one-thirtieth from "non-governmental receipts," temporary loans and bonds.

The gross governmental expenditure of the County and its political subdivisions for public health and medical care services was $572,907 in 1942. However, the net expenditure, the cost to the taxpayers, was considerably less. For example: The Niagara Sanatorium spent $289,170, but it collected $35,975 from patients, leaving $253,195 to be met by

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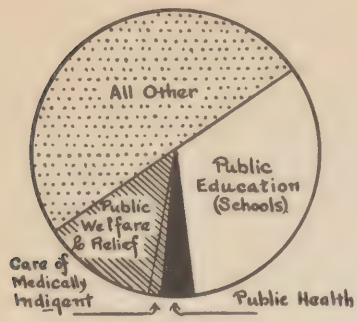
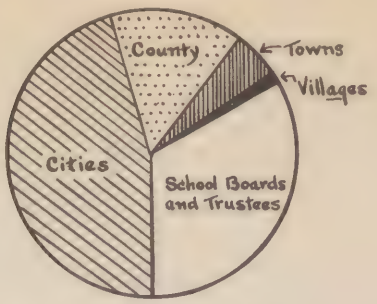
1/ SOCIAL WELFARE AND HEALTH SERVICES IN THE CITY OF NIAGARA FALLS; Community Chest of Niagara Falls, 1940.

2/ Approximately $2\frac{1}{4}$ cents for Niagara Sanatorium and $\frac{3}{4}$ of one cent for all other public health services.

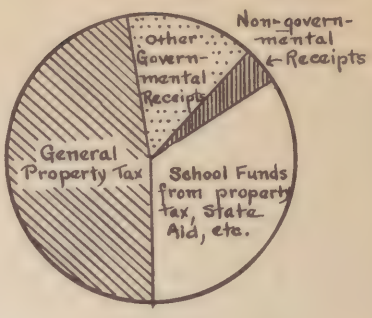
Chart 11. Expenditures and Sources of Public Funds Spent by Niagara County, the Minor Civil Divisions and Schools, 1942.




How the money was spent
Total: $13,164,785




By whom the money was spent
Total: $13,164,785

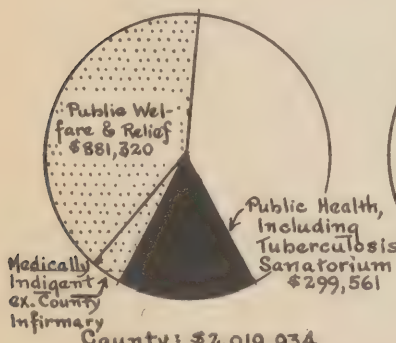



Where the money came from
Total: $13,783,198

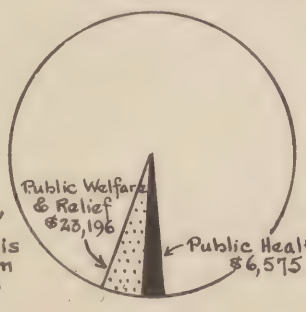
public funds. The expenditure for the care of handicapped children was $15,235, yet $12,387 thereof was met with State Aid Funds. Besides providing the services of the technical staff of the District State Health Office, the staffs of some clinics and stocking the Supply Stations, the State provided aid of $12,865 for public health nursing, the County Preventorium and approved laboratory service. Although the medical inspection program cost $47,849, approximately one-third of this expenditure was met by State-aid-for-education funds. The County and the State both contributed toward the cost of local mental patients hospitalized in Buffalo State Hospital. And the State Department of Social Welfare made reimbursements toward the $113,074 spent for care of the medically indigent. See Table 9 and Chart 12.

The method of financing the public health nursing program for the rural district merits consideration. The salaries of the supervisor and two of the six nurses are paid with State funds. The salaries of the other four are met with State aid funds (50%), by the towns (25%) and by the County Tuberculosis and Public Health Association (25%). Although some of this money passes through the County Treasury, this is only a bookkeeping arrangement. Basically the funds are not County funds; the County is merely acting as the disbursing agent.

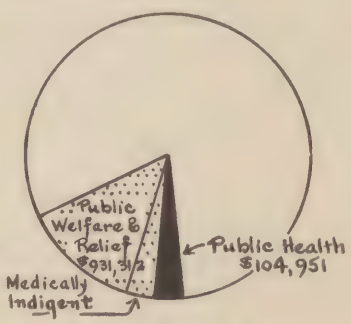
Chart 12. Distribution of Gross Public Expenditures, Exclusive of Schools, Niagara County and Minor Civil Divisions, 1942.




County: $2,019,934




Towns: $574,827




Cities: $6,072,704


Villages: $96,208

NOTE: The city expenditures for public welfare include $226,454 spent by Lockport for operation of Lockport City Hospital. In the net account this was offset by receipt of $217,685 from patients.

Table 9. Gross expenditures for Public Health Services and Care of the Medically Indigent by Niagara County and the Minor Civil Divisions, 1942.

| Location | Total | Public Health | | School Medical Inspection | Care of Medically Indigent |
|---|---|---|---|---|---|
| | | Niagara Sanatorium | All Other | | |
| Total | $572,907 | $289,170 | $122,814 | $47,849 | $113,074 1/ |
| County | 337,917 | 289,170 2/ | 10,391 3/ | | 38,356 |
| Towns | 6,575 | | 6,575 | | 4/ |
| Villages | 897 | | 897 | | |
| Cities | | | | | |
| Lockport | 58,890 | | 8,957 | 10,792 | 39,141 5/ |
| Niagara Falls | 140,339 | | 85,710 | 23,839 | 30,790 |
| No. Tonawanda | 22,322 | | 10,284 | 7,251 | 4,787 |
| Rural School Districts | 5,967 | | | 5,967 | |

1/ See Table 26, page 70, for itemized account.
2/ Of this amount $35,975 was collected as fees from patients, thereby leaving a net cost of $253,195.
3/ $5,605 of this amount was State aid for the County Preventorium and rural public health nursing service.
4/ Data not available.
5/ Includes medical care for Old Age Assistance cases which in the other cities and the Rural County is paid by County Welfare Department.

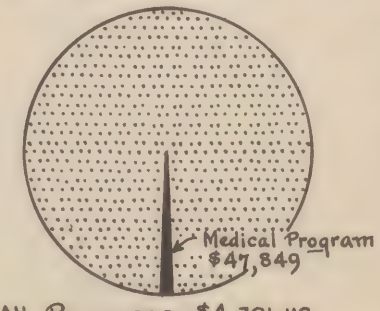
In the school year ending June 30, 1942 the three City Boards of Education and the School Trustees of the Rural School District spent $4,391,112. Of this sum, $47,849 was spent for the school medical inspection program, one cent out of every school dollar. The largest expenditures were for physicians and school nurses while a lesser sum was spent for dental service, mainly dental inspections and prophylaxis. For the County as a whole, approximately two-thirds of the school monies were from property taxes and one-third from State aid. The proportion of State aid to total school funds was lowest in Niagara Falls and highest in the Rural School Districts. See Chart 13 and Tables 27, 28 and 29 on pages 70 and 71.

HOSPITAL AND SICKNESS INSURANCE

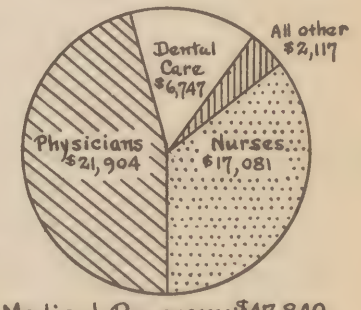
Many residents have insured themselves against unexpected and financially debilitating bills for hospitalization and medical care. Although some undoubtedly carry individual insurance policies, the greater portion are enrolled in the group insurance, payroll deduction plans promoted among the various employee groups.

The most universally subscribed to plan is that for hospitalization (Blue Cross Plan) offered by the Hospital Service

Chart 13. Expenditures for Public Education and School Medical Inspection Program for All Schools in Niagara County, 1942.




All Purposes: $4,391,112




Medical Program: $47,849

Corporation of Western New York. This organization also offers a medical and surgical care insurance plan but subscriptions to it are not available in Niagara County. Membership in the hospitalization feature, even underestimated, covers more than half the County residents. Four-fifths of Niagara Falls subscribes, three-fifths of Lockport and only one-fourteenth of the rest of the County, including North Tonawanda. The latter meager coverage is probably due to the large proportion of rural residents who, not being employed in large groups, are not eligible.

Hospitalization insurance rates are based on the number of individuals covered, i.e. individual, husband and wife and family (including children under 18 years of age). Monthly rates range from $.60 for an individual to $1.10 for husband and wife and $1.45 for a family, regardless of the number of children. No physical examination is required. Benefits provide 30 days of hospitalization, including maternity care, per year for any one person and incidental charges for tests, use of operating room, medicine, supplies and ambulance service.

In addition, 13 of the larger corporations in the County sponsor hospital and medical care insurance plans among their employees, four of them having the Blue Cross Plan only.[1/] The others promote one or more plans each which, in general, provide hospital care for employees and their dependents and surgical service for employees only. A number include life insurance and weekly sickness and accident benefit. A few offer disability and dismemberment insurance while one includes accidental death and another annuity insurance. A high proportion of the employees of each corporation are covered. The employers themselves contribute to the premiums of all plans except the Blue Cross Plan. See Table 30, page 72.

In general, the limitations in these plans are that dependents are not covered for surgical service and neither employees nor dependents are covered for fees for physicians, dentists, x-rays and special therapy.

1/ Inquiry was made of 20 industrial firms selected because they employed large numbers of persons in their respective cities. Fifteen replies were received. Two firms, Lockport Canning Co. and Bison Shipbuilding Co. promote no plans. The five not replying were: American Salesbook Co., Buffalo Pumps, Electro Metallurgical Co., Hooker Electrochemical Co. and Rudolph Wurlitzer Co.

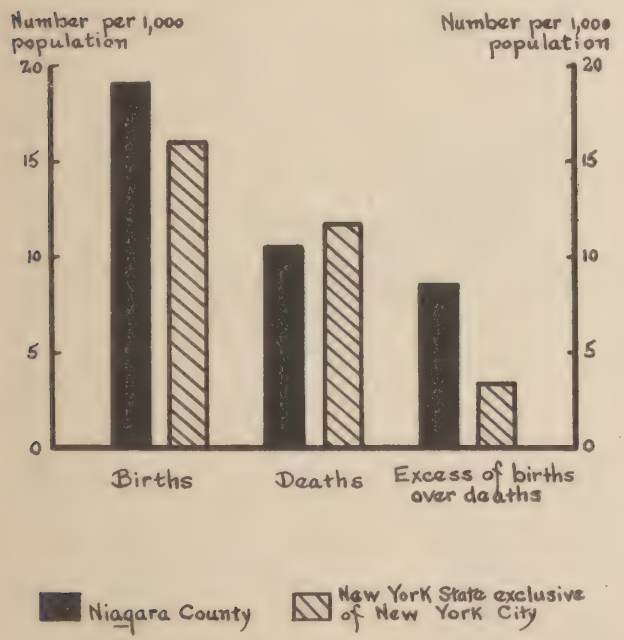
# EFFECTIVENESS OF SERVICES

The health status of the County reflects the effectiveness of and the promptness with which the residents use the health and medical care services. This effectiveness can be measured by (1) the physical condition of newborn infants and their mothers; (2) the death rate, with due consideration to age and causes of death; (3) the incidence of specific diseases; (4) and the general health of the residents as determined by competent medical examinations. Information is available on births, deaths and incidence of communicable diseases. Mass medical examinations have been confined to school children, the findings of which are available, and to men examined by Selective Service, the findings of which are not available for publication.

## Births and Deaths

The birth rate for Niagara County for five years, 1938 - 1942, is greater and the death rate less than that for New York State, exclusive of New York City. 1/ The excess of births over deaths is also greater for the County, indicating that the local population, as far as County-born individuals are concerned, is growing at a faster rate than that of Upstate New York. See Chart 14 and Tables 31 and 36, pages 74 and 79.

Chart 14. Births, Deaths and Excess of Births Over Deaths Per 1,000 Population, Niagara County and Upstate New York, 1938-1942.




Within the County itself, the death rates for Lockport and for the Rural County are greater and the birth rates less than for Niagara Falls and North Tonawanda. The excess of births over deaths is also less in Lockport and the rural district, indicating that, as far as local births are concerned, these two sections of Niagara County are growing at a lesser rate than the two cities. "The apparently high death rates in Lockport and in the County outside the cities, are probably due entirely to a larger than normal number of elderly persons, among whom the death rate is high." 2/ See Chart 15 and Tables 31 - 35, pages 74 to 78.

The County rates for deaths from specific causes, 1938 - 1942 were less than those for Upstate New York. Deaths due to communicable diseases, exclusive of tuberculosis, were negligible, attesting to the effectiveness of local communicable disease control and proper sanitation. The tuberculosis death rate fell from 40.4 per

1/ Birth and death rates used are for Niagara County residents. They include births and deaths of residents occurring outside the County and exclude those of non-residents occurring in the County except for accidental deaths. The latter are allocated to place of occurrence.

2/ Statement by Division of Local Health Administration, New York State Department of Health, June 1944.

100,000 population in 1938 to 22.8 in 1942, a tribute to the persistant case finding efforts and the high quality of sanatorium care in the County. Two out of every three deaths were caused by diseases usually associated with the older age group - pneumonia, cancer, diseases of the heart and arteries and nephritis. This tendency is most marked in Lockport and least dominant in Niagara Falls. The County rate of deaths due to accidents equals that of Upstate New York. One-third of the local accidental deaths were due to automobile accidents, predominating in the County outside the cities. Deaths due to home accidents are notable in Lockport and the rural districts. See Chart 16, Tables 31 - 37, pages 74 - 80.

Chart 15. Births, Deaths and Excess of Births Over Deaths Per 1,000 Population in the Cities and Rural District of Niagara County, 1938-1942.

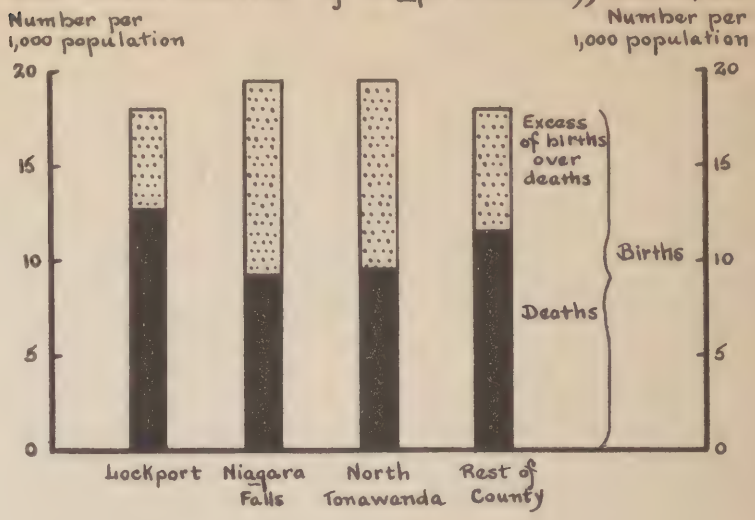
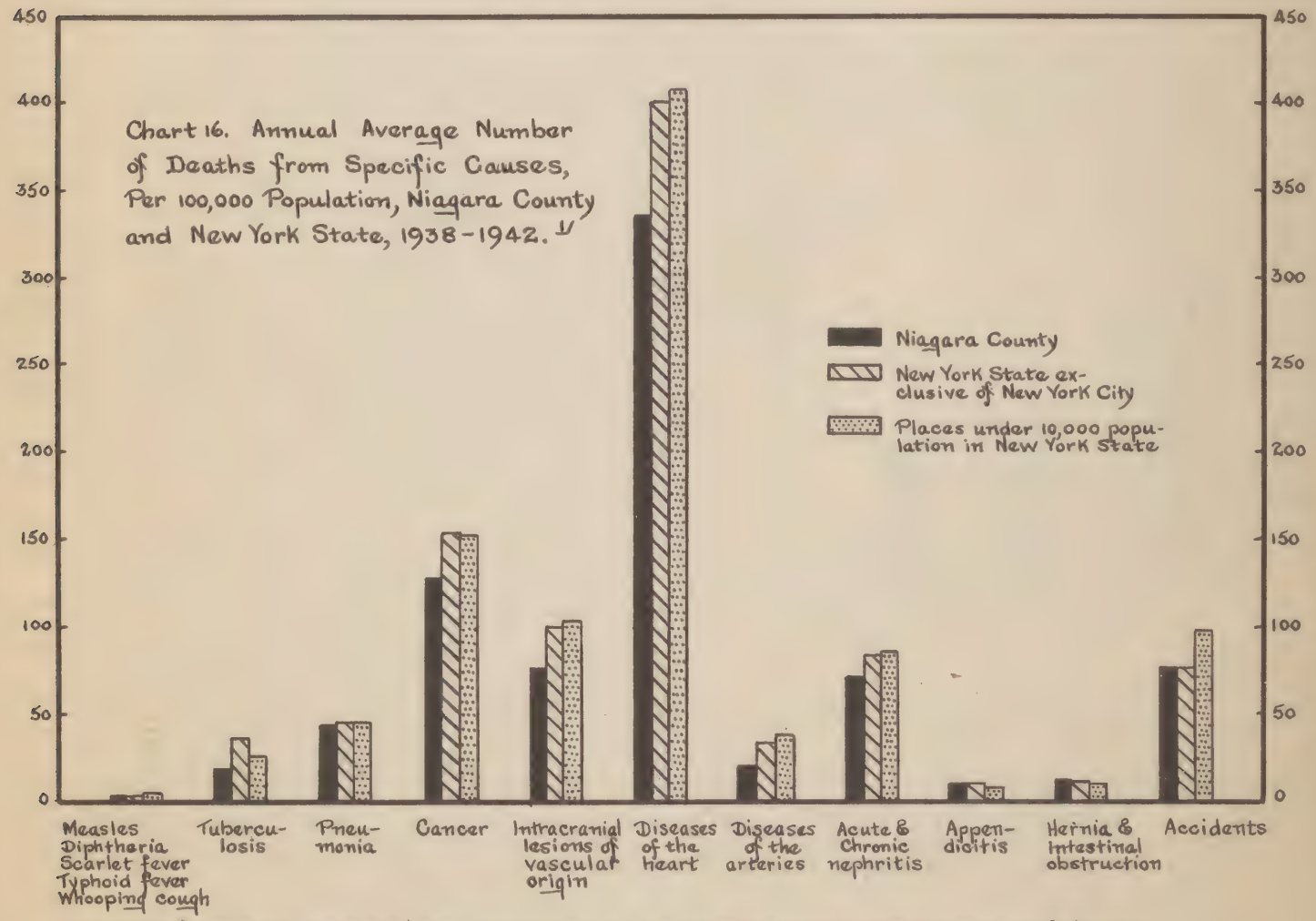



Chart 16. Annual Average Number of Deaths from Specific Causes, Per 100,000 Population, Niagara County and New York State, 1938-1942. 1/




1/ Adapted from data collected and tabulated by the New York State Department of Health.

# Facilities

As previously noted, the residents tend to use local facilities, availing themselves of those in Buffalo and Rochester only when specialized service and therapy, not procurable at home, are required. In the County itself, the facilities are concentrated in the three cities where three-quarters of the population lives.

HOSPITALS — The present 3.1 general hospital beds per 1,000 population will increase to 4.0 beds per thousand when the new wings of Niagara Falls Memorial and DeGraff Memorial Hospitals are opened. This still will fall short of the desirable ratio of 5 or more beds per 1,000 population and, since the additions will mainly serve Niagara Falls, North Tonawanda and their environs, they will not alleviate the situation at Lockport. Although the Lockport City Hospital provides 4.7 beds per 1,000 City population, there is a bed shortage because the hospital also serves an appreciable number of rural residents. The high percentages of occupancy of the general hospitals have been consistently beyond 75%, a further evidence of insufficient beds to meet the demand. 1/ But this is not the entire story. The occupancy percentages of the medical and surgical services of the hospitals exceed those for all services; the admission of less urgent cases is being deferred; and, with the continued growth of hospitalization insurance, there is little evidence that the demand for beds will decrease markedly. Coupled with these factors is the local consensus that the population will not decline sharply after the war.

On the other hand the two special hospitals, Niagara Sanatorium and Niagara Falls Municipal Hospital, have ample beds for providing specialized care. Last year the Sanatorium, caring mainly for the tuberculous, operated at 78% capacity, a low percentage for chronic care. The Municipal Hospital, restricting most of its care to cases of communicable disease, used only 25% of its total capacity. 2/ In this connection it should be noted that Lockport and its environs, having neither a hospital nor beds within a general hospital reserved for the care of communicable disease cases other than tuberculosis, must hospitalize such cases elsewhere. Although few such instances occur annually, there is some local consensus that provision should be made for them within the City.

NURSING HOMES AND COUNTY HOME INFIRMARY — The seven nursing homes, all of which are reputed to give good care, are in constant use. However, their fees of $18 - $25 per week make them prohibitive for long-term care for many infirm, chronically ill or convalescent cases. The 75 beds in the County Home Infirmary are in full use due to (1) the large number of infirm and chronically ill indigent persons requiring institutional care, (2) the town welfare officers frequently using the Infirmary for general hospital service for the medically indigent, (3) and the willingness of the Infirmary to do minor surgery, especially tonsillectomies. The policy of the Infirmary permitting the acceptance of other than infirm and chronically ill patients has created a bed shortage and slowed down admissions, some bothersome cases waiting as long as three months for admission.

CLINICS — The traditional public health clinics, exclusive of an antepartum clinic, at Niagara Falls are supplemented by dental clinics for persons unable to pay for care. Although North Tonawanda has the distinction of having frequent dental prophylaxis clinics, it has but one child health clinic monthly; and, although teaching proper child care through conferences, there is a physician present only once a month. Also,

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1/ Per cent occupancy of beds, Jan. through April, 1944: Lockport City Hospital 79.5%, Mt. Saint Mary's Hospital 84.7% and DeGraff Memorial Hospital 97.7%. This information was not reported by Niagara Falls Memorial Hospital whose occupancy percentage is known to be high.

2/ See ANNUAL REPORT OF THE BUREAU OF HEALTH OF NIAGARA FALLS, 1943.

North Tonawanda schedules its venereal disease clinic for Fridays from 2:00 to 3:00 p.m., an inconvenient hour for patients employed. Lockport has no child care clinic, no nurse-parent conferences, only periodic immunization clinics and, like North Tonawanda, its venereal disease clinic is scheduled for a time inconvenient to employed persons, Wednesdays from 4:00 to 5:00 p.m. The Rural County has no clinics and must depend upon the practicing physicians and the city clinics.

SUPPLY STATIONS — The Supply Stations, located in the three cities, are accessible to all physicians except those living in the extreme eastern portion of the County.

POTENTIAL CONSTRUCTION — The County has been forehanded and practical in considering and planning postwar construction to augment and improve its present health and medical care facilities. Lockport City and Wilson Village will improve their water and sewage facilities. However, there is not yet any official indication that North Tonawanda will construct the much needed sewage treatment plant and reserve water facility or that Olcott and Lewiston will install necessary sewer systems and sewage disposal plants. 1/

The six neighborhood health centers contemplated for Niagara Falls will house official public health services and make the City more health conscious. They will facilitate the holding of the City's venereal disease clinics elsewhere than the offices of the Health Bureau in the City Hall, an undesirable location. Patients now must come from all parts of the City for treatment and some undoubtedly feel that, when seen entering the City Hall, the reason for their presence is known. This may even dissuade citizens from attending the clinics.

The County recognizes the need for more hospital beds and adequate nurses' quarters as evidenced by the recent additions to the hospitals in Niagara Falls and North Tonawanda and the formulation of plans for a nurses' home at the Lockport City Hospital. However, despite the need for more general hospital beds in Lockport for patients from that City and the neighboring rural area, no plans exist for adding beds to the Lockport City Hospital or for building a county general hospital. Such beds are needed not only for acute cases but for the less frequent communicable disease cases.

Hospital facilities for the infirm and chronically ill have received much deserved attention, especially since such cases are not usually admitted by the general hospitals. The County Infirmary is to be expanded by 50 beds and will admit indigent infirm and chronic cases from all parts of the County. Niagara Falls is contemplating supplanting its present isolation hospital with a new, 100-bed municipal hospital to care for communicable disease, infirm, chronically ill and some acutely ill indigent patients.

These plans for the construction of facilities for the care of the chronically ill raise four points for serious consideration:

1. With both the County and Niagara Falls contemplating institutional facilities, there might be an overload of beds for this purpose. Furthermore, the City not only will be paying a major part of the County expenditure, but will also have to finance its own municipal hospital, a number of beds of which are to be used for the chronically ill.

2. A hospital for the chronically ill attached to the County Home will be devoid of high quality general hospital service, an essential requisite for adequate care of chronic cases. The nearest general hospital in Lockport City is not only at a distance but is already barely able to meet the demands for service to more urgent cases.

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1/ See page 26 for details.

3. Similarly, if the contemplated New Niagara Falls Municipal Hospital is to provide a high quality of service, it must incorporate most features of a general hospital. However, if this new hospital were conceived as a wing of Niagara Falls Memorial Hospital, it could share the latter's laboratory, pharmacy, physical therapy equipment, x-ray service, central heating unit and laundry facilities - services which, if duplicated, would add considerably to the capital and operating cost of the new plant. Besides, if the Municipal Hospital were joined to a general hospital, there could be a prompt and efficient interchange of patients, allocating to each unit the type of cases which it is best able to serve.

4. At present the Niagara Sanatorium is not being used to full capacity. If the present downward trend of occupancy continues into the first several years of the postwar period, some consideration might be given to using one of the Sanatorium buildings for another purpose. However, if such a change should be made, the building should be (a) given over in its entirety for the new service and (b) should not be subjected to a double authority, i.e. the Sanatorium management and another official County department or agency.

## Services

PUBLIC HEALTH

Public Health Nursing Service. The quality of public health nursing in a community directly influences the quality of the official public health service, for the nurses are responsible for many of the referrals to the clinics, some of the case finding, individual health education in the home and the follow-up of cases.

There is but one public health nurse in Lockport who, although originally employed for tuberculosis service only, does some follow-up on communicable disease and venereal disease cases; and no real effort has been made to employ additional nurses. Therefore the service in the City is spread thin and is limited. The North Tonawanda public health nursing service is also understaffed, consisting of only two nurses. Both serve communicable disease cases and, while one is solely responsible for the tuberculosis and venereal disease nursing service, the other is responsible for the maternal and child hygiene program. Because the latter must either attend or conduct a number of clinics and conferences, her time for home visiting and individual instruction is limited.

On the other hand, Niagara Falls is most aware that its public health nursing service is limited, a situation due to the wartime shortage of nurses. However, as a practical expedient, it has introduced the emergency "supplemental nurse" program and plans to employ nurses trained in public health when they become available. Even under these circumstances the Health Bureau is giving complete service although it has been compelled to limit the number of home visits for individual instruction below the standard commensurate with the highest quality of work. Considerable credit for this accomplishment is due the Supervisor of the Nursing Division of the Health Bureau, who, during the last six years, has reorganized the Division, stimulated clinic service, inaugurated staff education programs, participated in related community health activities and, in general, has increased the effectiveness of public health nursing both quantitatively and qualitatively.

In recent years the Rural County has increased its number of nurses from one to six. Several are new but, with proper supervision, they should be able to do creditable work. Unlike the city nurses, the rural nurses provide nursing service in the schools and do some home bedside nursing but do not have the responsibility of a number of weekly clinics.

One great threat to this rural nursing service is the unstable method by which it is financed. Since the State will continue indefinitely to pay half the salary of four of these nurses it would be preferable to have the County Government itself pay the remaining half rather than continue the present method by which, under an informal agreement, the local share is paid by the several towns and the County Tuberculosis and Public Health Association. 1/ The present arrangement, although making nursing service possible, is unsound and financially unstable.

The Niagara Sanatorium public health nurse serving the Rural County is reputed to be doing satisfactory work both in home visiting and at the Sanatorium. Some local persons are advocating the discontinuance of this specialized rural tuberculosis service and the establishment of a completely generalized rural nursing program, including service to tuberculosis cases. This is theoretically sound and is common practice in many counties. However, as long as the present method of financing the rural public health nursing service continues and until the program achieves real stability and a high quality of performance, it seems unwise to jeopardize the extra-hospital nursing service built up over a period of years.

Communicable disease. The incidence of communicable diseases has varied in the last five years. The annual numbers of cases of chicken pox, measles, scarlet fever and whooping cough have ranged from few to epidemic proportions. There has been but one case of diphtheria (in North Tonawanda in 1940) and scattered cases of typhoid. Until the summer of 1944 there have been few poliomyelitis cases, with the exception of the 17 epidemic cases in 1938 in Niagara Falls. No cases of smallpox were reported. The number of pneumonia and tuberculosis cases, although appreciable, have neither dramatically increased nor declined. The number of cases of goncrrhea has varied. Although the recorded number of syphilis cases is increasing, this may be due more to the reporting of cases brought to light by Selective Service examinations than to an actual increase of incidence, except in Niagara Falls. See Table 38, page 81.

Communicable diseases are controllable by immunization (diphtheria, whooping cough and smallpox), quarantine (all), adequate sanitation (particularly typhoid), and early diagnosis and treatment (all diseases, but especially tuberculosis and venereal disease). It is therefore important that local health officers continue to enforce quarantine, that children be immunized against diphtheria and smallpox, that sanitation be promoted, and that diagnoses be made and treatment be initiated promptly.

The vaccination of individuals against smallpox is optional in Lockport, North Tonawanda and the rural district but mandatory by State law in Niagara Falls because its population exceeds 50,000. Although it is probable that many vaccinations of residents are not reported, Table 10 indicates that they are spasmodic rather than a routine procedure.

Table 10. Number of Individuals Vaccinated Against Smallpox in Niagara County, 1938 - 1942.

| Year | County Total | Lockport | Niagara Falls | North Tonawanda | Rest of County |
|---|---|---|---|---|---|
| 1938 | 3,361 | 19 | 2,471 | — | 871 |
| 1939 | 2,069 | 895 | — | 55 | 1,119 |
| 1940 | 711 | 20 | 361 | 3 | 327 |
| 1941 | 2,904 | 17 | 2,494 | — | 393 |
| 1942 | 5,014 | 1,430 | 2,852 | — | 732 |

1/ The total salaries of the other two nurses are paid by the State Department of Health.

As of January 1, 1944, the County ranked twenty-fifth among the 57 upstate counties, exclusive of places over 10,000 population, in the per cent of children under five years of age immunized against diphtheria. Niagara Falls ranked fourth among the seven cities in the State with 50,000 - 100,000 population while North Tonawanda and Lockport ranked thirtieth and thirty-fifth, respectively, among the 48 cities with 10,000 - 25,000 population. The virtual absence of diphtheria cases in Niagara County supports the theory that if one-third of the children under five years of age are immunized against diphtheria, a community will not be subject to a major outbreak. The immunization percentages have, in general, exceeded 33% but are declining in Lockport and the Rural County. See Table 11.

Table 11. Per Cent of Children Under Five Years of Age Immunized Against Diphtheria in Niagara County, 1941 - 1944.

| Data as of: | Lockport | Niagara Falls | North Tonawanda | Rest of County |
|---|---|---|---|---|
| Jan. 1, 1941 | 35 | 49 | 45 | 36 |
| June 1, 1941 | 32 | 49 | 44 | 40 |
| Jan. 1, 1942 | 35 | 52 | 43 | 38 |
| June 1, 1942 | 42 | 54 | 42 | 37 |
| Jan. 1, 1943 | 37 | 54 | 36 | 32 |
| June 30, 1943 | 32 | 48 | 34 | 34 |
| Jan. 1, 1944 | 28 | 53 | 33 | 30 |

Tuberculosis. There were 194 active cases of tuberculosis in the County last year. A greater per cent of the active cases in Niagara Falls than in the rest of the County are hospitalized and therefore are not as prone to spread infection. The war itself, with allied fatigue, poor housing and possible faulty nutrition, has caused no increase in tuberculosis in the County. However, the enticing wages in war industry have increased the reluctance of active cases to accept hospitalization and have influenced some Sanatorium patients to request discharge against medical advice. See Table 12.

Table 12. Distribution of Active Cases of Tuberculosis in Niagara County, 1943.

| Residence | Total | In hospital | | Not in hospital |
|---|---|---|---|---|
| | | Number | Per cent of total | |
| Total | 194 | 126 | 64.9 | 68 |
| Lockport | 29 | 14 | 48.3 | 15 |
| Niagara Falls | 102 | 74 | 72.6 | 28 |
| North Tonawanda | 30 | 19 | 63.3 | 11 |
| Rest of County | 33 | 19 | 57.6 | 14 |

An increasing proportion of the total number of tuberculosis cases is being found among the adult, non-contact group. 1/ This is attributable to the fact that a 12 year, persistant County program in locating and examining contacts of tuberculosis cases has decreased the number of cases from this group while the non-contact group has remained more stable in size. New cases are now being located among newcomers to the County by mass x-ray programs among industrial employees and through Selective Service examinations. The favorable reaction of employers and other groups to the mass x-ray method augurs well for more thorough case finding in the future.

Venereal disease. The increase in known syphilis cases is partially due to better reporting. However, the increase in "early syphilis" cases in Niagara Falls 2/ is attributed to the new population coming from infected localities. The City contemplates police measures and a campaign of public health education to control the problem.

Maternal and Infant Welfare. Guarding the health of expectant mothers, newborn infants and preschool children is the joint responsibility of the official public health service and the private practitioners, including their services under the EMIC plan. The purpose of infant and maternal care is to insure a good quality of service to the mother before, during and after delivery and to teach her how best to care for the newborn infant and young child. If this purpose is fulfilled, the mothers retain good health and the infants begin life with excellent chances of survival.

The County death rate for infants is almost identical with that for Upstate New York. However, the rates for the localities within the County differ, both the infant and neonatal (under one month of age) mortality rates being greater for Niagara Falls and the Rural County than for Lockport and North Tonawanda. In this connection it should be noted that 96 of every 100 children born in the County in 1943 were delivered in hospitals. 3/ The maternal mortality rate was considerably lower in North Tonawanda and somewhat higher in Niagara Falls than in the rest of the County. See Chart 17 and Tables 31 - 37, pages 74 - 80.

Mental Health. The mental hygiene and child guidance clinics are more frequently used for diagnostic service for obviously disturbed patients than for the treatment of incipient emotional disturbances. The preventive possibilities of mental hygiene are either not fully understood or the persons expected to refer cases to the clinics are not aware at what points such referrals should be effected.

There have been no undue delay of admissions of the mentally ill to the Buffalo State Hospital, the epileptic to Craig Colony at Sonyea or the mentally retarded to Newark State School. Consequently the County has not, on the whole, had to make emergency arrangements pending admission.

Sanitation. As previously discussed in detail, the water and sewage systems of the County are good on the whole. 4/ Lockport and Wilson are planning sewage and water plant improvements and it is hoped that North Tonawanda, Lewiston and Olcott will promote installations. The milk sanitation in Niagara Falls and Lockport is satisfactory. The major current problem is the control of the quality of raw milk sold at the farms directly to city customers. The size of Niagara County makes it impossible for the District State Milk Sanitarian to give complete service and therefore he has spent most of his time supervising pasteurization plants.

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1/ A tuberculosis "contact" is usually considered to be a person living in the household of an active tuberculosis case.

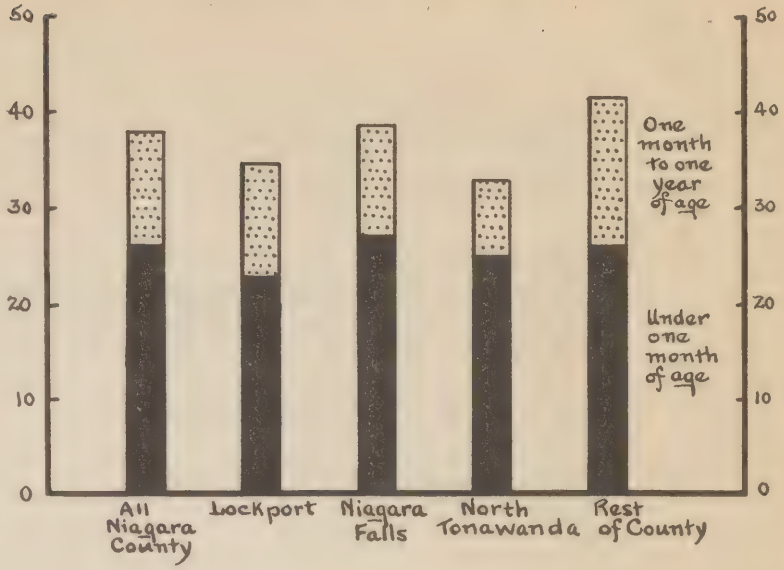
2/ In 1943 Niagara Falls reported 409 cases as against 243 in 1942. Of the 409 cases, 329 were late syphilis and 22 were of less than one year duration, according to the annual report of the Health Officer of Niagara Falls.

3/ Per cent of all births in hospitals: Lockport 98.4%, Niagara Falls 98.4%, North Tonawanda 95.7% and the County outside these cities 90.4%.

4/ See pages 26 and 27.

None of the three cities have stressed the inspection and prosecution of infractions of city ordinances relative to housing and overcrowding or, in the absence of adequate municipal ordinances relative thereto, have taken steps to promote such local legislation. When the influx of war workers began and a serious housing shortage existed, especially in Niagara Falls, the local authorities naturally tended to be lenient in their prosecutions. They realized that if houses were condemned the occupants could not find other homes to which to move. But now the situation has changed. The populations have stabilized and housing vacancies exist. Changes in the policies of enforcement and prosecutions are advisable.

Chart 17. Infant Deaths Per 1,000 Live Births in the Cities and Rural District of Niagara County, 1938-1942.



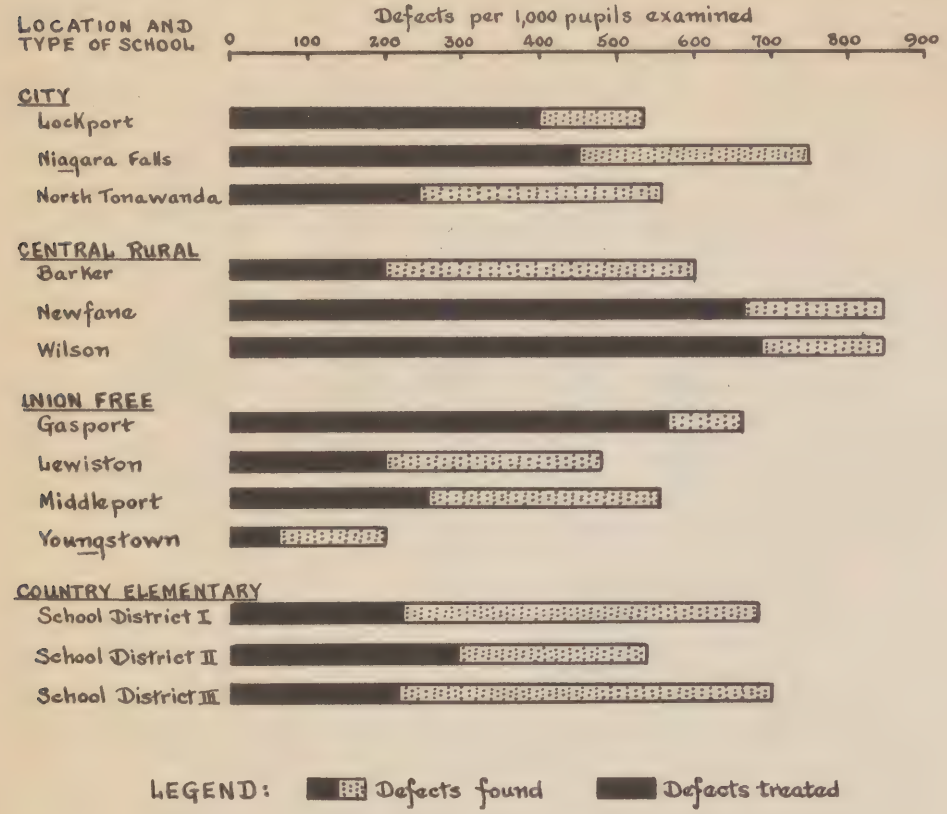

Laboratory Service. The three laboratories, located in Niagara Falls, Lockport and at the Niagara Sanatorium, are well situated geographically for use by most residents. North Tonawanda, on the other hand, tends to rely on Buffalo for service. Although the laboratories in Niagara Falls and Lockport are officially approved, neither would today be approved by the State Department of Health, since both have a part-time director, the same physician who, in addition, is engaged in clinical practice. The regulations now applicable to laboratories seeking approval require that their directors give full-time to the service. If the County is to have adequate, approved laboratory service available to all practicing physicians and administered under present accepted standards, the service should be under a full-time director, preferably with branches in each of the three cities.

Health Education. The many health education programs under varying auspices in the County, or even within any one of the three cities, are uncoordinated. Hence there is no uniform emphasis, no concerted and timely promotion of appropriate health education subjects and no unified effort and, possibly, there is a competition for audiences. Niagara Falls is the only administrative entity, aside from the County Government itself, that is large enough to warrant the employment of a full-time health educator to coordinate the local programs and supplement the health education features of the local school curricula. In the other two cities this coordination might well be one of several duties of an employee of the city health department.

School Health. In the 1942 - 1943 school year almost all the public school children had medical inspections in Lockport, North Tonawanda and the Rural County. Because of the war-wrought manpower shortage, Niagara Falls is inspecting only half of its school registration annually, getting a complete coverage in a two year period. The number of defects found per 1,000 pupils examined ranged from 198 in the Youngstown Village School to 847 in the Newfane School. All the schools except those at Newfane and Wilson were below the experience of the public schools of the State who, on the average, report around 850 defects per 1,000 pupils examined. This wide range may be due to a variation of quality of inspections in the different schools or because of better health among children in certain schools.

See Chart 18 and Table 39, page 82.

Chart 18. Number of Defects Found and Treated Per 1,000 Pupils Inspected in Schools of Niagara County, by Type of School, 1942-1943.



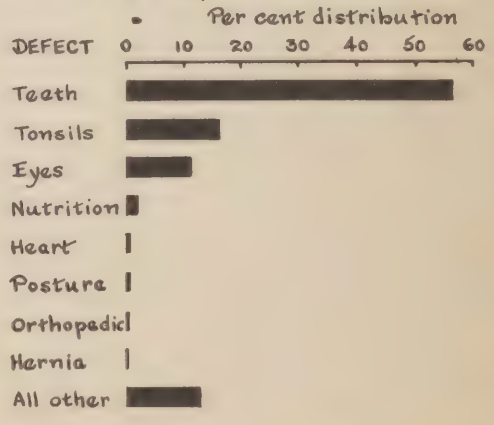

More than half of all defects found were teeth and one-quarter eye and tonsil defects, more than half of which were treated. The highest percentage of treatments were effected in Lockport, Niagara Falls, Newfane, Wilson and Gasport, with a low treatment per cent prevailing in most of the other schools. A high proportion of the teeth defects were cared for in Lockport, Newfane, Wilson and Gasport, and a high proportion of eye defects in most schools. It should be noted that the word "treatment" is used, indicating that some steps have been taken to remedy the defect. However, "treatment" may or may not be a complete correction. See Chart 19, Tables 40 and 41, page 83.

The large number of dental defects among all the school children and the relatively low percentage of treatment thereof in Niagara Falls, North Tonawanda, Lewiston, Youngstown, Middleport and Barker, does not augur well for the health of these children. For adequate dental care is essential to the preservation of good health. The problem is dramatically exemplified by the present experience of Selective Service. The Army, applying practically the same standard as in World War I, has found that the percentage of rejections for dental defects has tripled from 1917 to today. These rejectees are the school children of just a few years ago.

In 1941 Niagara Falls made a study of its grade school children requiring dental care and from a scientific sample found that three-quarter of the cases could not pay for service. 1/ Further inquiry revealed that the families of these children were either burdened with debt, could assume no financial obligations beyond maintenance expenses or considered dental care as unimportant. It is also true that the children whose families can afford dental care and consider it important, are not likely to evidence dental defects when inspected at school.

The magnitude of the dental problem among the school children could be reduced by promoting

Chart 19 Per Cent Distribution of Defects Found by Medical Inspections of Pupils in City, Central Rural and Union Free Schools of Niagara County, 1942-1943.




1/ DENTAL SURVEY REPORT, Dental Health Committee of the Niagara Falls Council of Social Agencies, 1941.

an active dental health education program among both children and parents, free dental care for those unable to pay and persistant follow-up of all defects noted.

Industrial Health. The industrial health programs are essentially a service within industry to safeguard the plants against employing physically unfit workers, encouraging precautionary health measures among those employed and caring for emergency cases. These programs have grown rapidly during wartime and have a potentiality for giving great impetus to good community health. They do not provide medical care in the usual sense and their home visiting and home nursing service is generally meager. Therefore some plants have a contract with the Niagara Falls Red Cross to provide home nursing service to selected cases on a fee basis. The future of this intra-plant service is unpredictable. Many of the plants are now working on war contracts on a cost plus basis and may elect to reduce the industrial health service when their peacetime products are manufactured for a more competitive, postwar, civilian market. However, if the service continues, it is hoped that the plants will employ some physicians trained in public health. Today all but two of the plant physicians serve on a part-time basis and few are trained for this specialized work.

The major coordination between the industries and health departments is in their mutual exchange of information relative to employees with venereal disease and tuberculosis and the effort of both groups to impress upon employees the need for prompt treatment. Since the Niagara Falls Health Bureau is more fully developed than the others, it could well encourage a closer working relationship with the industrial medical departments in that city.

MEDICAL AND DENTAL CARE

Adequacy and Availability. Niagara County is fortunate in having a number of capable, general practicing physicians and specialists and, in addition, able consultants in Buffalo and Rochester. The hospitals have consistantly been a part of the medical care team and a vital factor in making possible a good quality of service. However, with hospital beds now at a premium, admissions are less prompt and in-patient service for less urgent cases is often indefinitely postponed. The too frequent tendency, especially of the town welfare officers, to use the Infirmary of the County Home for general hospital service and minor surgery is highly questionable. The cheaper per diem Infirmary cost rather than quality of care is often the determining factor. The Infirmary is staffed to care for the indigent infirm, chronic and mildly ill inmates of the County Home who require only bed care, some nursing service, occasional visits of a physician. It is included neither as a hospital nor as a "related institution" in the listing of approved hospitals. 1/

As previously noted, home visiting nurse service is non-existant in Lockport, extremely limited in North Tonawanda and extensive in Niagara Falls. In the latter city the demand for this service to maternity cases returning home after brief periods of hospitalization has increased while the volume of service to cases of chronic illness has decreased. This is not indicative of a decrease in the number of chronically ill persons but is attributable to the cooperation of families who, during wartime, are requesting care only when it is urgent.

Some local physicians and allied medical personnel are of the opinion that many borderline individuals between the group of medically indigent and the group fully able to pay for medical care either do not receive adequate and prompt care or get care free from their physicians. Some of these borderline cases are reputed to defer calling a physician until their conditions are unduly aggravated and far advanced. The suggestion has been

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1/ See JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, March 25, 1944. (Hospital Number).

made locally that this situation should be remedied by a liberalization of eligibility for medical care by the various departments of public welfare and town welfare officers. In a surprising number of instances the medical personnel thought that the taxpaying public should become aware that the best "poormaster" was not the one who had the lowest budget but the one who provided adequate relief and good quality, prompt medical care to properly certified cases.

There was little consensus as to what extent ability to pay for dental care dominates the availability of service today. The fact that an individual has poor dental health does not necessarily indicate his inability to pay for care, for many persons consider oral health unimportant and others fear going to the dentist. The most concrete evidence of lack of care, for whatever reason, is the large number of untreated dental defects among the school children and the men examined by Selective Service. The demand for dental care is now greater than in the past with dentists booked a month or more in advance. Since the improved economic condition undoubtedly is a contributing factor in this demand, it is logical to assume that in less prosperous times many persons forego dental service for economic reasons.

Emergency Maternity and Infant Care Program. Private practitioners and hospitals have cooperated in providing maternity care under the EMIC Program to the wives and care to the infants of service men in specified pay grades. The number of authorizations in the County from July 1, 1943 through May 1, 1944 are shown in Table 13.

Table 13. Authorizations for Care Under the Emergency Maternity and Infant Care Program, by Type of Care, Niagara County, July 1, 1943 - May 1, 1944.

| Service requested | Total County | Lockport | Niagara Falls | North Tonawanda | Rest of County |
|---|---|---|---|---|---|
| Service to mothers | | | | | |
| Service of physician | 441 | 69 | 242 | 55 | 75 |
| Hospital care | 411 | 67 | 238 | 52 | 54 |
| Consultative service | 20 | 5 | 12 | 1 | 2 |
| Service to infants | | | | | |
| Service of physician | 53 | 14 | 22 | 3 | 14 |
| Hospital care | 27 | 7 | 11 | 3 | 6 |
| Consultative service | 16 | 7 | 5 | 1 | 3 |

The Medically Indigent. The various plans under which care is provided for the medically indigent utilize the established medical care facilities and personnel. The plans are administratively and financially satisfactory to the four local departments of public welfare and the town welfare officers and the quality of care to patients is reputed to be satisfactory. However, the fact that the administration of care for the medically indigent is under public welfare auspices tends to create a reluctance of persons who are medically indigent, but not on relief, to apply for assistance because they dislike being regarded as public charges. This precludes the possibility of early medical care, frequently deferring it until the illness has reached the stage when hospitalization is imperative and indisputable. When that point is reached the unwillingness of the patient to apply for care is lessened and, as far as the public agencies are concerned, there is more liberality in opening cases. Therefore, for this non-relief group, two factors seem to operate simultaneously: (1) the restrictions of the public agencies and (2) the unwillingness of persons to apply for relief when the only need is for non-hospital medical care.

The method of operation of the various plans for care of the medically indigent encounters local criticism on four scores: (1) The physicians are practically unanimous in declaring that the individual fees are too low. This is especially true of all obstetrical and surgical cases and for home calls made in the rural areas where no allowance is made for mileage and, because of the distance of drug stores, the physician is expected to supply medication at no extra charge. (2) Since the four welfare departments' plans vary in details, the physicians find it difficult to follow the prescribed administrative procedures and rates from case to case when these cases are known to different departments. (3) The practitioners claim that there is too much "paper work." (4) There is a consensus that the eligibility requirements for public financed medical care should be liberalized.

On the other hand most of the physicians and all the hospitals are amenable to medical care plans for the indigent which list specified rates for particular services. No program is ever acceptable to all persons and groups. However, with future increased shortages of physicians, dentists and nurses, probable increased costs of supplies and a possible postwar increase in the medically indigent population, consideration might well be given to the creation of a mutually satisfactory plan for care of the medically indigent. This might either be (1) a Niagara County Medical Care Plan to be administered uniformly by all four local departments of public welfare or (2) each of the departments might devise its own plan, incorporating therein a detailed rate structure and reporting forms for practitioners that will be identical in and common to all local plans.

Such a plan or plans, like the present arrangement, would use existing facilities and personnel to provide care to the medically indigent at rates mutually agreed upon by the departments and local professional persons, hospitals and vendors. It would differ from the present programs, except the one in force in Lockport, in the following ways: (1) Although social workers would continue determining eligibility for care, each department would have a full or part-time Medical Consultant, a physician, responsible for determining medical need as well as the quality, quantity and promptness of service. (2) The departments would have more latitude in setting rates reimbursable by the State Department of Social Welfare. (3) Specific written approval by the State Department would not be required prior to initiation of certain types of services, yet would be reimbursable. (4) Details of administration could be simplified.

Medical Care Plans are now in operation in 29 counties and six additional cities 1/ and are under development in three other counties and one city (Utica) of the State, exclusive of New York City. In February 1944 these districts had 64.1% of the total relief load of Upstate New York and in February 1938 had 62.5% of the total upstate load. See Chart 20.

The Chronically Ill. The County is very conscious of a growing problem of chronic illness, as evidenced by the planned extension of the County Infirmary and the intention of Niagara Falls to provide beds for chronic cases in its contemplated new municipal hospital. The cities are more aware of this problem than the rural areas, probably because living conditions in the Rural County are less crowded and therefore conducive to a more tolerant attitude toward chronic patients being cared for at home.

Chronic illness is usually associated with, but is not necessarily confined to, the older age group. In the last decade the percentage of older persons in the County has increased. Many of the chronically ill either have or will have depleted their financial resources. Therefore the problem is largely one for public solution. But it is not solely a problem of custodial care. Although the chronically ill do require institutional medical care for prolonged periods, usually in excess of two or three months, and some of them are incurable, a number can be rehabilitated. Therefore any chronic hospital service for these patients should be closely integrated with a general hospital service and every effort should be made to salvage those cases that can be returned to a productive, self-supporting status.

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1/ Binghamton, Jamestown, Lockport, New Rochelle, Plattsburg and Troy.

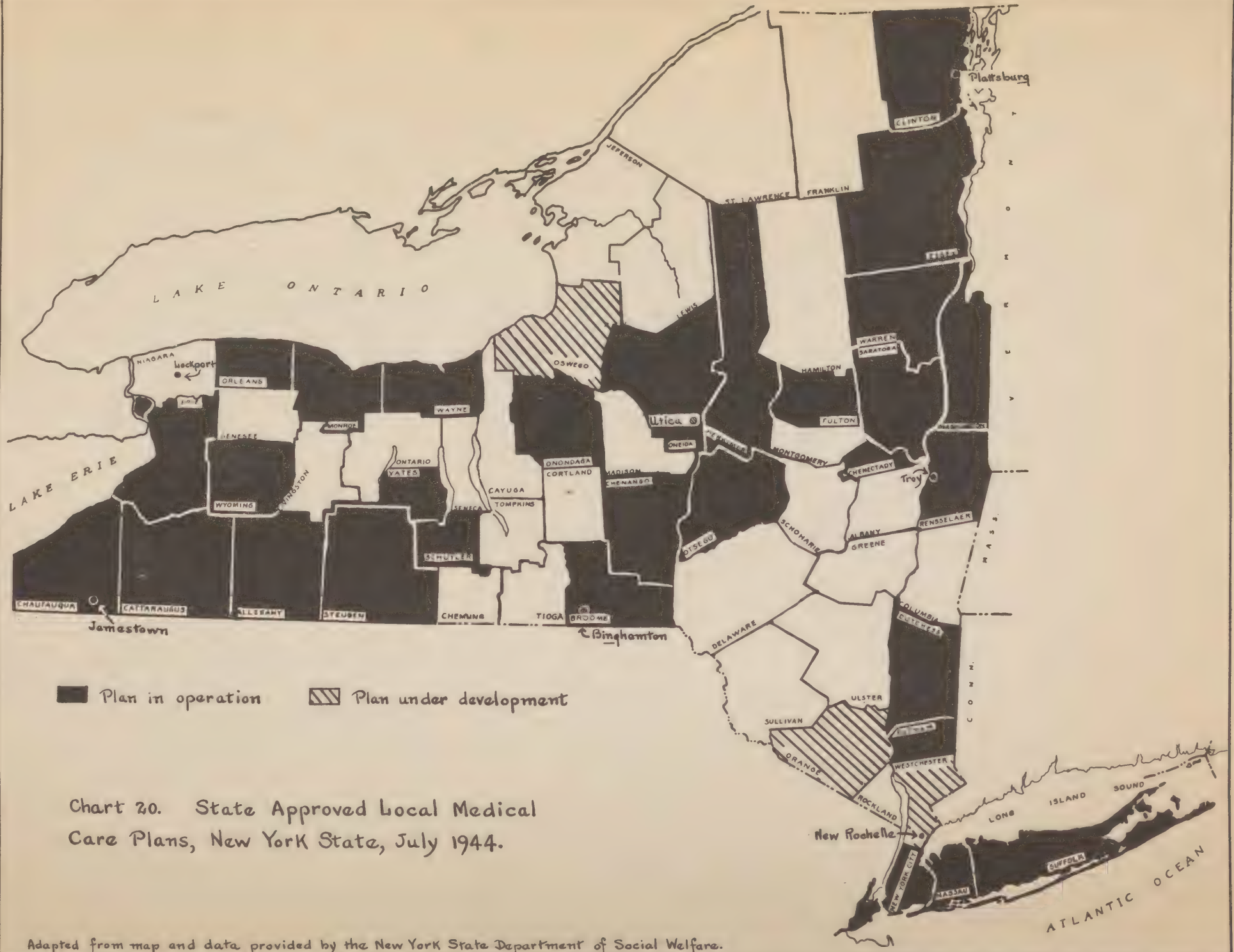



Chart 20. State Approved Local Medical Care Plans, New York State, July 1944.

Adapted from map and data provided by the New York State Department of Social Welfare.

Since many deaths in the County are due to causes generally associated with age, it seems logical that there will be an increasing number of infirm, chronically ill residents. Today such patients are attended by physicians and cared for in their own homes, in nursing homes and occasionally in general hospitals. Adequate care at home depends upon the willingness and competence of relatives, the physical condition of the home and the diagnosis. In addition to the proposed local chronic hospitals, this burden of care might be alleviated by public health nurses assisting in teaching families proper methods of care and, where necessary, assisting in lifting patients, changing beds and giving baths. This service is not now a part of the local official public health nursing program and only in Niagara Falls is it available to any extent.

MANPOWER

Physicians. There is the equivalent of one full-time private practicing physician for every 1,637 residents in the County. 1/ This is greater than one physician per 1,500 population which is considered sufficient to provide adequate medical care but is well below one physician per 3,000 or more population regarded as dangerous for the maintenance of health. 2/ However, when considered on the basis of locality of physicians, North Tonawanda is in the least favorable position with one physician per 2,038 residents and Lockport in the most favorable position with one physician for every 1,369 residents. 3/ To meet the demands for care under wartime conditions the physicians, with great hesitancy, have often used the telephone to follow up cases and, if hospital beds were available, have hospitalized unpredictable cases which might have otherwise been cared for at home. Because of losses to the armed services, the County is without the services of accredited specialists in obstetrics, ophthalmology, orthopedics and urology. There has never been an accredited pediatrician in the County. As a result, the specialists in Buffalo are used more frequently than usual.

Although the return of physicians now in service will help the situation, it will not alleviate the shortage entirely, according to local opinion. A number of the older physicians, including specialists, have died and there is not a full complement of young graduates to eventually replace them.

Dentists. There are 2,639 residents per dentist for the County as a whole, too large a number to insure adequate dental care. Lockport, with one dentist for every 1,809 residents, is more fortunate than the remainder of the County, but even this is almost double the ratio considered necessary if the residents are to have adequate dental care. With 13,648 residents per dentist in the County outside the cities, it is obvious that the rural residents cannot get sufficient service and therefore many rely upon the dentists in the cities who already are overworked. See Table 14.

Table 14. Population Per Dentist in Niagara County, May 1944.

| Location | Resident population per dentist 1/ | |
|---|---|---|
| | At present | If dentists in service return to previous practices |
| Total County | 2,639 | 2,156 |
| Lockport | 1,809 | 1,407 |
| Niagara Falls | 2,174 | 1,783 |
| North Tonawanda | 2,377 | 2,140 |
| Rest of County | 13,648 | 10,236 |

1/ Computed on basis of 1943 estimated population.

1/ In computing this ratio allowance has been made for the limited activity and part-time practice of some physicians.

2/ Formula used by Procurement and Assignment Division of Selective Service.

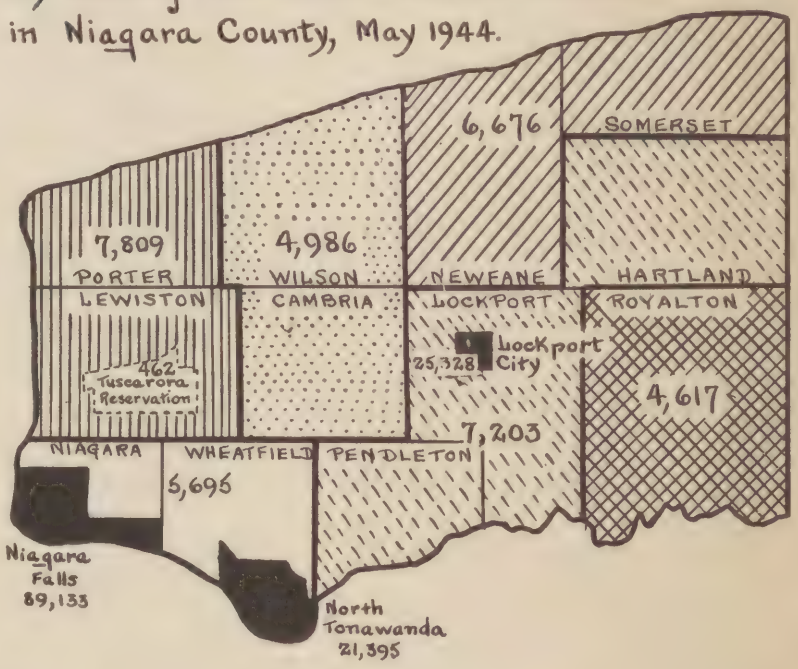
3/ Ratios by localities: Lockport 1:1,369; Niagara Falls 1:1,592; North Tonawanda 1:2,038; Rest of County 1:1,780.

Even in the postwar period there will not be sufficient dentists to provide adequate care as these ratios will not change markedly. 1/ Consequently a huge backlog of unmet dental need is being created, at a time when the population is best able to pay for service, and seems destined to persist. One method of partially alleviating this situation would be the more universal use of dental hygienists who could relieve the dentists of less technical routine procedures.

Nurses. The hospitals are operating on a very close margin of staff nurses. The actual number of staff nurses has not only decreased considerably but an appreciable number of those working are doing so on a part-time basis only. Because of the nursing shortage newly built beds have not been opened; hospital admissions have increased; private duty nurses are at a premium; and the present limited hospital service is becoming more and more dependent upon the voluntary service of Nurses Aides, both men and women. Approximately one-fifth of the registered nurses of the County are inactive and some now employed in unessential nursing are not transferring to essential nursing positions. 2/

Each of the different types of public health nursing service - official public health, school health and home visiting nursing - must be considered as separate programs, especially in Niagara Falls, because of their diverse administrative auspices. The school nursing program, under the general supervision of the State Department of Education, has a sufficient number of school nurses in the cities in proportion to the school registration. 3/ The number of official public health nurses is insufficient in all parts of the County, especially in North Tonawanda and Lockport, to carry on the traditional public health nursing services. Home visiting nurse service is negligible except in Niagara Falls and even there, according to the Red Cross, it is not adequate to provide complete service. See Chart 21.

Chart 21. Populations and Rural Areas Served by Each of the Public Health Nurses in Niagara County, May 1944.




NOTE: Rural population shown are adapted from U.S. Census, 1940. City populations estimated by New York State Department of Health, 1943.

Two points of view exist in the County relative to the advisability of having a unified public health nursing service providing both school nursing service and official public health nursing service. Some school

1/ The American Dental Association and U.S. Public Health Service have stated that: (1) One dentist per 1,000 population can provide adequate dental care for each of these 1,000 potential patients. This is generally assumed to mean that each individual receives 60% of the dental care he actually needs. (2) One dentist per 2,500 population is needed to provide emergency dental service, i.e. complete service for some, adequate service for others and only "emergency" service for the rest.

2/ "Unessential" on basis of Procurement and Assignment Classifications of War Manpower Commission.

3/ School nursing in the Rural County is provided by the official County public health nurses, in addition to their other duties.

officials state that such a unification would subordinate the nursing service to school children to the rest of the program and would make the nurses unavailable for determining the necessity of absences from the classroom, when such absences are purportedly due to illness. Similarly, the Sanatorium is of the opinion that the assimilation of the extra-hospital service now provided by its public health nurse in the Rural County would be ineffective if the institution were to lose direct administrative control thereof.

Conversely, other individuals feel that the splitting of the total public health nursing program into three distinct operational entities is inefficient, expensive, requires excessive nurse-manpower and is confusing to the citizens. In their opinion the situation resulting from the present method of diversified administration is that: (1) the school nurses have a smaller case load; (2) their cases are geographically more concentrated; (3) the school and public health nurses cover identical territories and often the same homes; (4) school age children are the responsibility of both types of nurses, the province of one for a restricted group of defects found in medical inspections at school and the province of the other for such problems as communicable disease and orthopedic handicaps; (5) and both types of nurses are promoting a health education program with the same general population. Consequently they advocate that the three types of care - all of which are public health nursing, whether publicly or privately financed - be combined; and conclude that, with such a consolidation, each of the communities in the County would come much closer to meeting minimum adequate standards as to the number of residents per nurse. For example, if the school and official public health nursing services were combined, all the areas in the County would approach the minimum standard of one nurse per 5,000 population. See Table 15.

Table 15. Population Ratio for Official Public Health and School Nursing Service in Niagara County, May 1944.

| Location | Population per nurse 2/ | Total public health and school nurses | Nurses and type of service 1/ | | |
|---|---|---|---|---|---|
| | | | Official public health only | School nursing only | Public health and school nursing |
| Standard 3/ | 5,000 | | | | |
| Lockport | 6,332 | 4 | 1 | 3 | — |
| Niagara Falls | 4,951 | 18 | 10 | 8 | — |
| No. Tonawanda | 5,349 | 4 | 2 | 2 | — |
| Rest of County | 5,459 | 7½ | - | - | 7½ 4/ |

1/ Exclusive of supervisory personnel.
2/ For consolidated official public health and school nursing services.
3/ As adopted by American Public Health Association.
4/ Includes six full-time County public health nurses, one full-time nurse of Niagara Sanatorium, one half-time nurse at Tuscarora Indian Reservation.

Home visiting nursing is the other nursing service of the public health triumverate. This service has not been developed to any extent in the County, exclusive of Niagara Falls. Yet it is needed. Home nursing would help relieve the pressure for admission to hospitals, make possible earlier hospital discharges, provide a medically sound method of following up convalescent cases, promote more individual health instruction in the home,

make unnecessary the immediate institutionalization of some cases of chronic illness and assist in conserving the valuable time of practicing physicians. With the present number of public health nurses, Niagara Falls is the only area in the County even approaching the minimum adequate standard of one nurse per 2,500 population to provide official public health, school and home visiting nursing. See Table 16.

Table 16. Population Ratio for All Public Health Nursing Services in Niagara County, May 1944.

| Location | Population per nurse 2/ | Total, all types of public health nursing | Nurses and type of service 1/ | |
|---|---|---|---|---|
| | | | Official public health and school nursing | Home visiting nursing only |
| Standard 3/ | 2,500 | | | |
| Lockport | 6,332 | 4 | 4 | |
| Niagara Falls | 3,565 | 25 | 18 | 7 |
| North Tonawanda | 4,754 | 4½ | 4 | ½ 4/ |
| Rest of County | 5,459 | 7½ | 7½ | - |

1/ Exclusive of supervisory personnel.
2/ For consolidated official public health, school and home visiting nurse service.
3/ As adopted by American Public Health Association.
4/ Part-time nurse.

If the school and official public health nursing services were consolidated, the present number of nurses would be approximately sufficient to meet minimum standards. However, if in addition, the service were to include home visiting nursing the number of nurses required to conform with minimum standards would be double the present number, except in Niagara Falls. The efficiency, quality and economy of such consolidated programs would depend upon the employment of trained public health nurses and adequate and competent supervision. Some modification might be necessary in the number of nurses required for complete coverage of sparsely settled rural areas where distances between homes are great. See Table 17.

Table 17. Number of Nurses Needed for a Consolidated Public Health Nursing Program in Niagara County to Provide Minimum Adequate Service. 1/

| Location | Nurses needed for official public health and school nursing only | | | Nurses needed for complete public health nursing service 2/ | | |
|---|---|---|---|---|---|---|
| | Total | Now employed | Additional needed | Total | Now employed | Additional needed |
| Lockport | 5 | 4 | 1 | 10 | 4 | 6 |
| Niagara Falls | 18 | 18 | 0 | 36 | 25 | 11 |
| No. Tonawanda | 4 | 4 | 0 | 8 | 4½ | 3½ |
| Rest of County | 8 | 7½ | ½ | 16 | 7½ | 8½ |

1/ Exclusive of supervisory personnel
2/ Official public health, school and home bedside nursing services.

Other Personnel. The County continues to have the services of the District State Health Officer, his assistant, the District State Sanitary Engineer and Milk Sanitarian. The size, population and local variations in the County make it impossible for one milk sanitarian to carry out fully all phases of supervision of pasteurization plants and raw milk. Therefore the County might well employ its own, full-time milk sanitarian to advantage, especially for service to the Rural County. State aid would probably be obtainable toward meeting such a salary.

The laboratories are completely staffed but have experienced a turnover of technicians. As previously noted, the practice of having all three laboratories under the direction of a physician who is simultaneously engaged in the clinical practice of medicine is not to the best interest of the County.

The retention of maintenance personnel in the hospitals is difficult, time-consuming and creates administrative problems. This situation is due to local wartime demands for labor and will continue until there are appreciable layoffs by local industries. In the interim the hospitals are worrying along with makeshift arrangements and some part-time workers, not knowing from day to day how much longer even such service will continue.

COORDINATION The coordination of the health and medical care services in the County as a whole and within each of the cities would result in more prompt, efficient, economical and better quality of care. However, since each of the local areas differs from the others and each has developed its own services in accordance with the public opinion and needs of its community, strong traditions have developed. This precludes any great degree of coordination among various areas within the County.

The services that effect a large proportion of the population within each of the local communities are best administered separately for each of the four local areas. Each locality can then pace its services in accordance with its needs, public opinion, financial ability and philosophy of government. Thus no area would be deterred by others. However, within each locality better teamwork should be encouraged. There should be more coordination between the official public health and school medical program; between the health departments and the home visiting nurse service of the Red Cross; and between the official public health and industrial medical program. There should also be better coordination among the Tuberculosis and Public Health Association and the Red Cross - so that more residents become informed and interested in their own health and, as taxpayers, assume responsibility for adequate health and medical care to all the County.

On the other hand, services used by only a small portion of the population can be more efficiently and economically operated on a Countywide basis. Examples of such services are: (1) a County sponsored laboratory service with branches in each of the three cities; (2) the Niagara Sanatorium; (3) an adequate chronic hospital, either incorporating the features of or constructed as a wing of a general hospital; (4) the employment of a County milk sanitarian; (5) sanitary engineering service covering all the County 1/ and (6) uniform Countywide rates and reporting forms for physicians providing care to the medically indigent.

In the end, there is but one objective - safeguarding and improving the health of the residents of Niagara County. This cannot be achieved without an informed citizenry, a conviction on the part of the taxpayers, an economical use of manpower, efficient use of public and private funds and a simple, direct approach to the people themselves.

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1/ Now in effect with the State Department of Health providing the personnel. This should be continued.

# CONCLUSIONS

The growth of Niagara County, the tenth most populous county in Upstate New York, is due largely to the growth of Niagara Falls, the ninth largest upstate city. Each of the three cities and the Rural County differs from the others in cultural background, length of residency and size and density of population, standards of housing, employment opportunities, financial capacity, type of government and sense of civic responsibility. Some are more interested than others in promoting public health and medical care facilities and services. Each moves at a pace commensurate with local public opinion, resulting in the development of governmental and voluntary health services of diversely administered and varying quality. The advent of war has caused an influx of war workers to the chemical, iron products, airplane, paper, plastics and small boat plants in the cities. Housing shortages, overtaxed transportation facilities, high wages, crowded hospitals, overextension of sanitation facilities and increased demands for medical and dental care have resulted. There is no evidence that the end of the war, reconversion to peacetime manufacture and a shortening of the work week will cause a corresponding exodus of the newcomers. Therefore the County, and especially Niagara Falls, must plan their services on the basis of a population larger than that of 1940 and slightly less than that of 1943.

Under prewar conditions the County was relatively self-sufficient in health and medical care facilities, depending only on Buffalo and Rochester for highly specialized diagnostic, surgical and therapy services. When the 161 new beds at Niagara Falls Memorial and DeGraff Memorial Hospitals are opered, there will be sufficient general hospital beds for North Tonawanda and Niagara Falls. However, there will still be a shortage of beds in Lockport to meet the increasing demands of that City and the neighboring rural district. Furthermore, Lockport neither has nor plans to reserve a modest number of beds for communicable disease cases. Although the County Home Infirmary is frequently used for general hospital service, it is neither staffed nor equipped to provide good quality hospital care. The Niagara Sanatorium is providing a high quality of care, has adequate facilities and offers excellent leadership in the local tuberculosis program.

The County and Niagara Falls are both considering postwar construction of hospital facilities for the chronically ill, apparently without mutual consultation to ascertain whether this might result in an overload of beds for such patients. The County has not planned its new Infirmary Unit to incorporate, or adjoin, an adequate general hospital service. Niagara Falls, under present plans, will duplicate the overhead costs of a general hospital and has not fully considered building its new municipal hospital as a wing of an already established, approved general hospital.

The sanitation facilities in the County are generally satisfactory. However, North Tonawanda is in need of a sewage treatment plant, to eliminate the flow of untreated drainage into the Niagara River, and storage space for a reserve water supply. Both Lewiston and Olcott need sewer systems and sewage disposal plants, the latter to obviate nuisance conditions and complaints. None of the three cities have stressed the inspection and prosecution of infractions of city ordinances relative to housing and overcrowding or, in the absence of adequate municipal ordinances relative thereto, have taken steps to promote such local legislation.

The availability and quality of medical care, except as limited by wartime shortages, are generally satisfactory. However, there are two groups of individuals reputed as not getting medical care promptly: (1) some of those who neither can be classified as medically indigent nor are well able to pay for care personally or through insurance; and (2) those who are medically indigent, but not on relief, who are reluctant to apply for assistance for medical care only because they dislike being regarded as public charges. Frequently these individuals defer going to a physician until an illness has

reached the stage when hospitalization is imperative. Locally, the suggestion has been advanced that this situation might be partially alleviated by a liberalization of eligibility for all types of medical care by the local departments of public welfare and the town welfare officers. Also, the physicians feel that the fees for services to the medically indigent are too low and that the lack of uniform administrative procedures for care of the medically indigent among the four local departments of public welfare is confusing and time-consuming. Dental care is not readily available, as evidenced by the low percentage of corrections of dental defects among many school children, the inadequate number of dentists in proportion to the population and the fact that dentists are tightly booked a month or more in advance.

The official public health service in the County is making real strides. The number of public health nurses in the Rural County and in Niagara Falls has been increased and Niagara Falls hopes to expand its service still further. Public health clinic service is rather extensive in Niagara Falls and North Tonawanda, is most limited in Lockport and is negligible in the Rural County. The school medical inspection program has good coverage and an appreciable portion of defects found among the school children of Lockport, Niagara Falls, Newfane, Wilson and Gasport are treated. Although there are approved laboratories in Niagara Falls and Lockport, their director serves both cities on a part-time basis and is simultaneously engaged in the clinical practice of medicine. There is no close, official working agreement between the departments of health and the medical departments of industries within each of the three cities.

Most public health field work is carried on by the official public health nurses, the school nurses and the home visiting nurses of the Red Cross, each covering the same geographical territory and often the same homes, but for slightly different purposes. There are two points of view in the County relative to the advisability of consolidating these nursing services within each of the three cities and within the Rural County. One viewpoint is that such a unification would tend to subordinate one or more of the services now administered independently. The other holds that such a consolidation would increase efficiency, economy and conservation of manpower and improve quality. The public health nursing program in the Rural County is financially unstable as the several towns and the County Tuberculosis and Public Health Association, rather than the County Government itself, pay the local share of the nurses' salary on the basis of an informal agreement.

The medical, dental, nursing and hospital personnel has rendered excellent service under trying, wartime circumstances. The present shortage of physicians, nurses and hospital maintenance personnel will be partially relieved with the demobilization of the armed forces and reversion of local industry to a peacetime level. However, the acute shortage of dentists will persist even then unless additional dentists open practices in the County, especially in the districts outside the three cities.

The all-over public health and medical care service in the County is effective. Deaths caused by communicable diseases are negligible, with the exception of those due to tuberculosis, and even these are steadily decreasing. Most of the recent deaths have been due to diseases associated with the older age group, indicating that the County can expect an increasing number of chronically ill persons. This general satisfactory health status is due to the immunization of children against diphtheria and smallpox, locating active cases of tuberculosis, maintaining a high quality of sanitation, emphasizing proper child care and encouraging prompt care by physicians. Unfortunately, the possibilities of a coordinated health education program with good coverage has never been fully appreciated as a method of informing the residents of the ways of preventing sickness, the advisability of securing prompt medical care when ill and the ultimate economy of using the health and medical care services wisely. Without an awareness of these aspects, the citizens cannot intelligently promote adequate health and medical care facilities and services in the community.

# SUGGESTIONS

The following suggestions for the improvement of health and medical care facilities and services in the County are listed by specific local areas so that each might readily consider those applicable to itself. Suggestions for revising or consolidating services sponsored or supervised by State departments have been made only when such changes conform with the policy of the department involved - for these suggestions can be effected within the County itself without waiting for prior action on the State level. Since some local agencies and organizations have an interest in the suggestions made, these groups are listed on page 84. It is hoped that these organizations will be consulted and their assistance enlisted in carrying out the suggestions.

## The County As A Whole [1]

1. Ascertain whether both the contemplated extension of the County Home Infirmary and the planned, new Niagara Falls Municipal Hospital are needed to meet the anticipated demands for institutional care of the chronically ill.

2. Consider the medical expediency and feasibility of constructing the proposed extension of the County Home Infirmary as a wing of an already established, approved general hospital.

3. Consider using one entire building of the Niagara Sanatorium for hospitalization of other than tuberculosis cases if the occupancy rate of the Sanatorium decreases steadily in the several years following the war. However, if a conversion is effected, the building should not be subjected to a double authority, i.e. the Sanatorium management and another official County agency or department.

4. Discontinue the practice of providing general hospital care and minor surgery service in the County Home Infirmary.

5. Establish an Approved County Laboratory (a) having branches in Lockport, Niagara Falls and North Tonawanda; (b) under the direction of a full-time director; and (c) financed by the County Government with State aid.

6. Formulate a Niagara County Medical Care Plan for the care of the medically indigent that will be administered uniformly by the County Department of Public Welfare and the departments of public welfare in each of the three cities

   or

   formulate separate medical care plans for each of these four departments, incorporating in each plan identical, detailed rate structures and reporting forms for practitioners and hospitals.

7. Encourage mass chest x-ray examinations among adult groups, especially industrial groups.

8. Encourage the reporting of smallpox vaccinations done by practicing physicians, rural health officers and the medical departments of industries. (This does not apply to Niagara Falls where such reporting is mandatory by State law.)

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[1] Lockport, Niagara Falls, North Tonawanda and the Rural County.

9. Encourage the practice of additional dentists in the County.

10. Consider the employment of a full-time, qualified milk sanitarian, paid by the County Government with State aid, to serve all sections of the County, especially the areas outside the cities.

11. Establish a County Health Committee 1/ composed of representatives of the three City Health Preparedness Committees, County Health Preparedness Committee, professional medical and related organizations, hospitals, Board of County Supervisors and schools to consider and promote the foregoing suggestions in the order of their importance to the health of the County. Refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution, yet are not the responsibility of any specific State department.

## Lockport City

1. Consider increasing the bed capacity for acutely ill patients at the Lockport City Hospital, and reserving some beds for communicable disease cases.

2. Increase the number of public health nurses markedly.

3. Inaugurate a home bedside nursing service as a part of the City's official public health nursing service.

4. Stimulate women and men to serve as Nurses Aides in the Lockport City Hospital.

5. Establish child health clinics and nurse-parent conferences.

6. Plan an effective means of securing a greater per cent of diphtheria immunizations among children under five years of age.

7. Ascertain the reason for the low rate of defects per 1,000 pupils examined in the school medical inspections and take steps to remedy this situation.

8. Schedule the Venereal Disease Clinic at an hour more suitable to patients employed during the daytime.

9. Promote a more vigorous inspection and prosecution of infractions of municipal ordinances relative to plumbing, housing and overcrowding, and if such ordinances are inadequate, sponsor local remedial legislation.

10. Intensify and coordinate the health education programs now sponsored by the various local organizations.

11. Coordinate the services of the City Health Department and the medical departments of local industries.

12. The Lockport Health Preparedness Committee, in cooperation with the Council of Community Agencies, should consider and promote the foregoing suggestions relating to Lockport in the order of their importance to the health of the City; and refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution, yet are not the responsibility of any specific State department.

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1/ The proposed Committee should be carefully selected so that it will be geographically representative and composed of approximately 12 or less well qualified individuals.

## Niagara Falls City

1. Ascertain whether or not the contemplated construction of the new Niagara Falls Municipal Hospital is necessary for the institutional care of chronically ill patients if the planned extension of the County Home Infirmary is consummated.

2. If the decision is made to build a new Municipal Hospital, consider the feasibility and medical expediency of building this structure as a wing of an already established approved general hospital in the City.

3. Increase the number of public health nurses.

4. Stimulate women and men to serve as Nurses Aides in the hospitals within the City.

5. Consolidate the home bedside nursing service of the Niagara Falls Chapter of the American Red Cross with the City Bureau of Health.

6. Ascertain the reason for the low percentage of eye defects found in the school medical inspections and, if indicated, take steps to remedy this situation; and promote a program for increasing the number of dental defects treated.

7. Determine the cause for the infant mortality rate being higher in the City than in Lockport and North Tonawanda and take steps to lower it.

8. Promote a more vigorous inspection and prosecution of infractions of municipal ordinances relative to housing and overcrowding and, if ordinances relative thereto are inadequate, sponsor local remedial legislation.

9. Consider the employment of a full time health educator by the City Bureau of Health who will intensify and coordinate the health education programs now carried on in the City by the various organizations.

10. Coordinate the services of the Bureau of Health more closely with the medical departments of local industries.

11. The Niagara Falls Health Preparedness Committee, in cooperation with the Niagara Falls Council of Social Agencies, should consider and promote the foregoing suggestions relative to Niagara Falls in the order of their importance to the health of the City; and refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution; yet are not the responsibility of any specific State department.

## North Tonawanda City

1. Promote plans for the postwar construction of a sewage treatment plant and a reserve water facility.

2. Increase the number of public health nurses markedly.

3. Inaugurate a home bedside nursing service as a part of the City's official public health nursing service.

4. Stimulate women and men to serve as Nurses Aides in the DeGraff Memorial Hospital.

5. Increase the number or frequency of meeting of child health clinics conducted by physicians.

6. Ascertain the reason for the low rate of defects found per 1,000 pupils examined in the school medical inspections and, if indicated, take steps to remedy this situation; and promote a program for increasing the number of defects treated, especially those of teeth and tonsils.

7. Schedule the Venereal Disease Clinic at an hour more suitable to patients employed in the daytime.

8. Promote a more vigorous inspection and prosecution of infractions of municipal ordinances relative to plumbing, housing and overcrowding and, if ordinances relative thereto are inadequate, sponsor local remedial legislation.

9. Intensify and coordinate the health education programs now carried on in the City by the various organizations.

10. Coordinate the services of the City Health Department and the medical departments of local industries.

11. Enlarge the North Tonawanda Health Preparedness Committee by the addition of qualified, civic minded professional and lay individuals and then have this Committee consider and promote the foregoing suggestions relating to North Tonawanda in the order of their importance to the health of the City. Refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution, yet are not the responsibility of any specific State department.

## The County Outside the Three Cities

1. Promote plans for the postwar construction of a sewer system and sewage disposal plant at Olcott and Lewiston.

2. Finance the County share of the salaries of the public health nurses with County Government funds instead of continuing the present method by which, under an informal agreement, the local share is paid by the several towns and the County Tuberculosis and Public Health Association.

3. Increase the number of public health nurses.

4. Increase the volume of home bedside nursing service done as a part of the public health nursing program.

5. (a) Determine the reason for the abnormally low rate of defects found in the school medical examinations at Barker, Gasport, Lewiston, Middleport and Youngstown, and in School Districts I and II, and take steps to remedy this situation.

   (b) Ascertain the reason for the striking varying proportion of eye defects found among the total defects in the village and rural schools and, if due to a varying quality of examinations, promote an improvement in such examinations.

   (c) Determine the reason for the disproportionate number of nutrition defects found in Lewiston.

   (d) Consummate a greater per cent of treatment of defects in Barker, Lewiston, Middleport, Youngstown and in School Districts I and III, with special attention to dental defects in Barker, Lewiston and Middleport, to eye defects in Barker and tonsil defects in Youngstown.

6. Determine the cause of the infant mortality rate being higher in the Rural County than in Lockport and North Tonawanda and take steps to lower it.

7. Plan an effective means of securing a greater per cent of diphtheria immunizations among children under five years of age.

8. Improve the general sanitary conditions in the country elementary schools.

9. Intensify and coordinate the health education programs now promoted by various organizations.

10. The Niagara County Health Preparedness Committee should consider and promote the foregoing suggestions relative to the County outside the cities in the order of their importance to the health of the County; and refer to the New York State Health Preparedness Commission those problems which may be of a Statewide nature or which defy local solution, yet are not the responsibility of any specific State department.

# APPENDIX

Table 18. Estimated Population of Niagara County, July 1, 1938 - July 1, 1943. 1/

| AREA | 1938 | 1939 | 1940 | 1941 | 1942 | 1943 |
|---|---|---|---|---|---|---|
| Niagara County | 158,223 | 159,301 | 160,379 | 161,457 | 171,269 | 176,799 |
| Niagara Falls | 77,579 | 77,836 | 78,093 | 78,350 | 86,345 | 89,133 |
| Lockport | 24,166 | 24,288 | 24,409 | 24,531 | 24 536 | 25,328 |
| No. Tonawanda | 20,038 | 20,161 | 20,285 | 20,408 | 20,726 | 21,395 |
| Rest of County | 36,440 | 37,016 | 37,592 | 38,168 | 39,662 | 40,943 |

1/ Compiled by New York State Department of Health.

Table 19. Population of Niagara County, by Minor Civil Subdivisions, April 1, 1940. 1/

| Name | Total | Rural Town | Village | City |
|---|---|---|---|---|
| Total | 160,110 | 32,493 | 4,955 | 122,662 |
| Niagara Falls City | 78,029 | | | 78,029 |
| Lockport City | 24,379 | | | 24,379 |
| North Tonawanda City | 20,254 | | | 20,254 |
| Cambria Town | 1,925 | 1,925 | | |
| Hartland Town | 2,527 | 2,398 | | |
| Middleport Village (part) (Rest in Royalton T.) | | | 129 2/ | |
| Lewiston Town | 4,448 | 3,168 | | |
| Lewiston Village | | | 1,280 | |
| Lockport Town | 3,160 | 3,160 | | |
| Newfane Town | 4,635 | 4,635 | | |
| Niagara Town | 2,618 | 2,618 | | |
| Pendleton Town | 1,516 | 1,516 | | |
| Porter Town | 3,361 | 2,562 | | |
| Youngstown Village | | | 799 | |
| Royalton Town | 4,617 | 3,171 | | |
| Middleport Village (Rest in Hartland Town) | | | 1,446 2/ | |
| Somerset Town | 2,041 | 1,589 | | |
| Barker Village | | | 452 | |
| Wheatfield Town | 3,077 | 3,077 | | |
| Wilson Town | 3,061 | 2,212 | | |
| Wilson Village | | | 849 | |
| Tuscarora Indian Reservation | 462 | 462 | | |

1/ Adapted from U. S. Census, 1940.
2/ Total population of Middleport Village, 1,575.

Table 20. Population of Niagara County, by Race and Sex, 1940. 1/

| Area and Sex | Total | | White | | | | | | Negro | | Other Races | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total | | Native | | Foreign-born | | | | | |
| | Number | Per Cent | Number | Per Cent | Number | Per Cent | Number | Per Cent | Number | Per Cent | Number | Per Cent |
| Niagara County | 160,110 | 100.0 | 158,203 | 98.8 | 128,645 | 80.3 | 29,558 | 18.5 | 1,226 | 0.8 | 681 | 0.4 |
| Male | 81,598 | 100.0 | 80,608 | 98.8 | 65,051 | 79.7 | 15,557 | 19.1 | 648 | 0.8 | 342 | 0.4 |
| Female | 78,512 | 100.0 | 77,595 | 98.8 | 63,594 | 81.0 | 14,001 | 17.8 | 578 | 0.8 | 339 | 0.4 |
| Niagara Falls | 78,029 | 100.0 | 76,940 | 98.6 | 57,206 | 73.3 | 19,734 | 25.3 | 975 | 1.2 | 114 | 0.2 |
| Male | 39,375 | 100.0 | 38,804 | 98.6 | 28,680 | 72.9 | 10,124 | 25.7 | 518 | 1.3 | 53 | 0.1 |
| Female | 38,654 | 100.0 | 38,136 | 98.7 | 28,526 | 73.8 | 9,610 | 24.9 | 457 | 1.2 | 61 | 0.1 |
| Lockport | 24,379 | 100.0 | 24,118 | 98.9 | 21,559 | 88.4 | 2,559 | 10.5 | 211 | 0.9 | 50 | 0.2 |
| Male | 12,064 | 100.0 | 11,927 | 98.9 | 10,545 | 87.4 | 1,382 | 11.5 | 106 | 0.9 | 31 | 0.2 |
| Female | 12,315 | 100.0 | 12,191 | 99.0 | 11,014 | 89.4 | 1,177 | 9.6 | 105 | 0.9 | 19 | 0.1 |
| No. Tonawanda | 20,254 | 100.0 | 20,251 | 100.0 | 16,914 | 83.5 | 3,337 | 16.5 | 2 | 2/ | 1 | 2/ |
| Male | 10,361 | 100.0 | 10,360 | 100.0 | 8,529 | 82.3 | 1,831 | 17.7 | 1 | 2/ | - | - |
| Female | 9,893 | 100.0 | 9,891 | 100.0 | 8,385 | 84.8 | 1,506 | 15.2 | 1 | 2/ | 1 | 2/ |
| Rest of County | 37,448 | 100.0 | 36,894 | 98.5 | 32,966 | 88.0 | 3,928 | 10.5 | 38 | 0.1 | 516 | 1.4 |
| Male | 19,798 | 100.0 | 19,517 | 98.6 | 17,297 | 87.4 | 2,220 | 11.2 | 23 | 0.1 | 258 | 1.3 |
| Female | 17,650 | 100.0 | 17,377 | 98.5 | 15,669 | 88.8 | 1,708 | 9.7 | 15 | 0.1 | 258 | 1.4 |

1/ Adapted from U.S. Census, 1940 and compiled by New York State Department of Health.
2/ Less than one-tenth of one per cent.

Table 21. Population of Niagara County, by Age, April 1, 1940. 1/ 2/

| Age Group (in years) | Total | | Niagara Falls City | | Lockport City | | No. Tonawanda City | | Rest of County | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Number | Per Cent | Number | Per Cent | Number | Per Cent | Number | Per Cent | Number | Per Cent |
| All ages | 160,110 | 100.0 | 78,029 | 100.0 | 24,379 | 100.0 | 20,254 | 100.0 | 37,448 | 100.0 |
| Under 5 | 11,840 | 7.4 | 5,763 | 7.4 | 1,702 | 7.0 | 1,475 | 7.3 | 2,900 | 7.7 |
| 5 - 14 | 25,194 | 15.7 | 12,470 | 16.0 | 3,541 | 14.5 | 3,377 | 16.7 | 5,806 | 15.5 |
| 15 - 24 | 29,379 | 18.4 | 15,100 | 19.3 | 4,035 | 16.5 | 4,011 | 19.8 | 6,233 | 16.7 |
| 25 - 34 | 26,464 | 16.5 | 13,660 | 17.5 | 3,847 | 15.8 | 3,429 | 16.9 | 5,528 | 14.8 |
| 35 - 44 | 22,532 | 14.1 | 11,447 | 14.7 | 3,412 | 14.0 | 2,758 | 13.6 | 4,915 | 13.1 |
| 45 - 54 | 20,370 | 12.7 | 10,013 | 12.8 | 3,100 | 12.7 | 2,474 | 12.2 | 4,783 | 12.8 |
| 55 - 64 | 13,337 | 8.3 | 5,796 | 7.4 | 2,288 | 9.4 | 1,559 | 7.7 | 3,694 | 9.9 |
| 65 - 74 | 7,665 | 4.8 | 2,791 | 3.6 | 1,583 | 6.5 | 839 | 4.2 | 2,452 | 6.5 |
| 75 and over | 3,329 | 2.1 | 989 | 1.3 | 871 | 3.6 | 332 | 1.6 | 1,137 | 3.0 |

1/ Adapted from U.S. Census, 1940.
2/ In the County as a whole and in the cities the population is almost evenly divided between male and female. The variations are negligible in the age distribution, by sex, in the County as a whole or in any one city. However, in the rest of the County, there are 12% more males than females with a greater proportion of the latter in the "under five," "5 through 14" and "25 through 44" age groups. The male group has a greater proportion in the "15 through 24" and "55 through 64" age groups.

Table 22. Distribution of Gainfully Employed Persons in Niagara County, 14 Years Old and Over, by Industrial Groups, 1940. 1/

| Industrial Group | Number of Persons Employed | Per Cent Distribution |
|---|---|---|
| Total | 59,808 | 100.0 |
| Agriculture and forestry (except logging) and fishing | 4,736 | 7.9 |
| Manufacturing | 28,542 | 47.7 |
| Transportation, communication and other public utilities | 3,599 | 6.0 |
| Wholesale and retail trade | 8,207 | 13.7 |
| Domestic and personal services | 3,980 | 6.7 |
| Professional and related services | 3,904 | 6.5 |
| All other | 6,840 | 11.4 |

1/ Adapted from Census of the U.S., Second Series, "Characteristics of the Population, N. Y."

Table 23. Clinic and Conference Schedule, Niagara County, May 1944.

| Type | Time | Place | Auspices |
|---|---|---|---|
| **LOCKPORT CITY** | | | |
| Child guidance | Bimonthly | Clinton School | State Dept. of Mental Hygiene |
| Immunization and vaccination | Periodically | Health centers & schools | City Health Dept. |
| Mental hygiene | Bimonthly | Dept. of Public Welfare | State Dept. of Mental Hygiene |
| Orthopedic | Quarterly | Eagles' Temple | State Dept. of Health. |
| Venereal disease | Wed. 4 - 5 P.M. | 21 Niagara St. | City Health Dept. |
| **NIAGARA FALLS CITY** | | | |
| Chest x-ray (tuberculosis) | Tues. 1:30 - 3:30 P.M.<br>Thurs. 6:15 P.M. | Memorial Hospital<br>Memorial Hospital | City Health Bureau, Tuberculosis and Public Health Asso |
| Child guidance | | Beman Clinic | Beman Foundation |
| Child health and immunization | Tues. 1:30 - 4:30 P.M.<br>Wed. 1:30 - 4:30 P.M.<br>Thurs. 1:30 - 4:30 P.M.<br>Fri. 1:30 - 4:30 P.M. | Station #2, 1402 - 18th St.<br>Station #3, 510 - 19th St.<br>Station #1, 321 - 13th St.<br>Station #4, 8728 Buffalo Ave. | City Health Bureau |
| Classes for expectant mothers | 1st and 3rd Mondays<br>2nd and 4th Mondays | St. Mary's Hospital<br>LaSalle Health Sta. | City Health Bureau<br>City Health Bureau |
| Mental hygiene | 1st and 3rd Tuesdays | City Hall | State Dept. of Mental Hygiene |
| Nurse-parent conferences | Wed. 10 - 11 A.M.<br>Thurs. 1:30 - 4 P.M.<br>Fri. 1:30 - 3:30 P.M. | Pine Acres Housing Project<br>Griffin Manor Housing Project<br>Hyde Park Housing Project | City Health Bureau |
| Orthopedic | Quarterly | Hyde Park School | State Health Dept. |
| Venereal disease | Mon. 4:30 - 6 P.M. (men)<br>Wed. 4:30 - 6 P.M. (women)<br>Fri. 3:30 - 6 P.M. (men and women) | City Hall<br>City Hall<br>City Hall | City Health Bureau |

(Continued on next page)

Table 23. Clinic and Conference Schedule, Niagara County, May 1944. (Continued)

NORTH TONAWANDA CITY

| Type | Time | Place | Auspices |
|---|---|---|---|
| Chest x-ray (tuberculosis) | Tues. 2 P.M.<br>Tues. 7 P.M. | DeGraff Memorial Hospital | City Health Dept. |
| Child guidance | Upon request | Col. Payne School | State Dept. of Mental Hygiene |
| Child health conf. | 4th Wed. 2 - 4 P.M. | City Hall | City Health Dept. |
| Dental hygiene 1/ (dental prophylaxis) | 2nd and 4th Wed. 2 - 4 P.M.<br>2nd Monday<br>Last Friday of month<br>Quarterly | City Hall<br>Gilmore School<br>Gratwick School<br>Wurlitzer School | City Health Dept. |
| Immunization | 1st Tues. 9 A.M. | City Hall | City Health Dept. |
| Mental hygiene | 4th Tuesday | City Hall | State Dept. of Mental Hygiene |
| Nurse-parent conferences (child health supervision) | Fri. 2 - 4 P.M.<br>Wed. 2 - 4 P.M. (except 4th Wed.)<br>Mon. 2 - 4 P.M.<br>Thurs. 2 - 4 P.M. | Gratwick School<br>City Hall<br>Gilmore School<br>Wurlitzer School | City Health Dept. |
| Orthopedic | Semi-annually | City Hall | State Health Dept. |
| Venereal disease | Fri. 2 - 3 P.M. | City Hall | City Health Dept. |

LOCKPORT TOWN

| | | | |
|---|---|---|---|
| Tuberculosis | Mon. through Thurs. 1 - 3 P.M. | Niagara County Sanatorium | Niagara County |

NOTE: In addition, immunization and vaccination clinics are held periodically by the town and village health officers within their respective jurisdictions.

1/ Conducted as a part of the nurse-parent conferences.

Table 24. Gross Expenditures and Receipts of Niagara County, Minor Civil Divisions and Schools, 1942. 1/

| Governmental Unit | Expenditures | | | | | Receipts | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Public Welfare & Relief | Public Health | Public Education | All Other | Total | General Government Receipts | | Non-Governmental Receipts | Schools (All Sources) |
| | | | | | | | General Property Tax | All Other 2/ | | |
| Total | $13,154,785 | $1,835,328 3/ | $411,984 | $4,391,112 | $6,515,861 | $13,783,198 | $6,720,675 | $2,103,959 | $505,734 | $4,452,830 4/ |
| Niagara Co. | 2,019,934 | 881,320 | 299,561 5/ | --- | 839,053 | 2,272,962 | 1,424,374 | 848,588 | --- | |
| Cities | 6,072,704 | 931,312 | 104,951 | --- | 5,036,441 | 6,312,299 | 4,852,863 | 1,032,415 | 427,021 | |
| Lockport | 1,146,183 | 445,211 6/ | 8,957 | | 692,015 | 1,178,111 | 772,762 | 405,349 | | |
| Niagara Falls | 4,211,003 | 334,846 7/ | 85,710 | | 3,790,447 | 4,205,695 | 3,453,550 | 325,124 | 427,021 | |
| N. Tonawanda | 715,518 | 151,255 | 10,284 | | 553,979 | 928,493 | 626,551 | 301,942 | | |
| Villages | 96,208 | --- | 897 | --- | 95,311 | 105,330 | 75,825 | 14 505 | 15,000 | |
| Barker | 13,230 | | 25 | | 13,205 | 17,175 | 4,422 | 753 | 12,000 | |
| Lewiston | 18,407 | | 202 | | 18,205 | 14,754 | 12,832 | 1,922 | | |
| Middleport | 34,626 | | 381 | | 34,245 | 38,908 | 31,458 | 4,450 | 3,000 8/ | |
| Wilson | 15,529 | | 159 | | 15,370 | 22,406 | 17,981 | 4,425 | | |
| Youngstown | 14,416 | | 130 | | 14,286 | 12,087 | 9,132 | 2,955 | | |
| Towns | 574,827 | 23,196 | 6,575 | --- | 545,056 | 639,777 | 367,613 | 208,451 | 63,713 | |
| Cambria | 26,650 | 983 | 396 | | 25,271 | 24,891 | 16,840 | 8,051 | | |
| Hartland | 33,445 | 1,089 | 516 | | 31,840 | 37,117 | 22,004 | 15,113 | | |
| Lewiston | 97,639 | 1,437 | 652 | | 95,550 | 115,057 | 43,070 | 28,924 | 43,063 9/ | |
| Lockport | 33,852 | 2,474 | 589 | | 30,789 | 36,438 | 25,024 | 11,414 | | |
| Newfane | 94,915 | 3,440 | 1,198 | | 90,277 | 97,240 | 56,991 | 39,749 | 500 8/ | |
| Niagara | 48,912 | 3,101 | --- | | 45,811 | 65,572 | 34,725 | 30,847 | | |
| Pendleton | 23,558 | 969 | 282 | | 22,307 | 28,573 | 23,262 | 5,311 | | |
| Porter | 35,638 | 2,726 | 521 | | 32,391 | 44,403 | 25,708 | 18,695 | | |
| Royalton | 79,717 | 1,669 | 769 | | 77,279 | 76,850 | 38,178 | 18,672 | 20,000 8/ | |
| Somerset | 26,260 | 2,545 | 633 | | 23,082 | 28,045 | 21,873 | 6,022 | 150 8/ | |
| Wheatfield | 28,710 | 1,933 | 585 | | 26,192 | 31,979 | 21,618 | 10,361 | | |
| Wilson | 45,531 | 830 | 434 | | 44,267 | 53,612 | 38,320 | 15,292 | | |
| School Boards and Trustees | 4,391,112 | --- | --- | 4,391,112 | | 4,452,830 | | | | 4,452,830 |

1/ Adapted from "State of New York Special Report on Municipal Accounts, 1942" and data provided by the New York State Department of Education. Fiscal years: County, Nov. 1, 1941 - Oct. 30, 1942; cities and towns, Jan. 1, 1942 - Dec. 31, 1942; villages, Mar. 1, 1941 - Feb. 28, 1942. Includes funds relative to general expenses of government, debt service, permanent improvements. Excludes funds relative to commercial public utilities, advances, deposits, transfers, refunds, trust and investment transactions.

2/ Interest, rents, licenses, permits, fines, penalties, gifts, grants, earnings, sales of property, mortgages, franchises, etc.

3/ Includes expenditures for medical care of the medically indigent and handicapped children.

4/ Of this total $2,681,454 (60%) was from taxes on property and $1,616,827 (36%) was from State Aid funds.

5/ Includes $289,170 spent by Niagara Sanatorium which collected $35,975 in fees, leaving a net cost of $253,195

6/ Includes $226,954 spent for the City Hospital which collected $217,685 in fees, leaving a net cost of $9,269

7/ Includes $15,000 contribution to hospital.

8/ Temporary loan.

9/ $43,000 of this amount was from bonds.

Table 25. Distribution of Gross Expenditures of Niagara County, Minor Civil Divisions and Schools, 1942. 1/

| Expenditure Item | Total | | County | | 3 Cities | | 5 Villages | | 12 Towns | | Schools | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent |
| Total | $13,154,785 | 100.0 | $2,019,934 | 100.0 | $6,072,704 | 100.0 | $96,208 | 100.0 | $574,827 | 100.0 | $4,391,112 | 100.0 |
| Public health | 411,984 2/ | 03.1 | 299,561 2/ | 14.8 | 104,951 | 1.7 | 897 | 0.9 | 6,575 | 1.2 | --- | --- |
| Public welfare and relief | 1,835,828 3/ | 14.0 | 881,320 3/ | 43.6 | 931,312 3/ | 15.3 | --- | --- | 23,196 3/ | 4.0 | --- | --- |
| Public education | 4,391,112 | 33.4 | --- | --- | --- | --- | --- | --- | --- | --- | 4,391,112 | 100.0 |
| All other | 6,515,861 | 49.5 | 839,053 | 41.6 | 5,036,441 | 83.0 | 95,311 | 99.1 | 545,056 | 94.8 | --- | --- |

1/ Adapted from Table 23.
2/ Includes expenditures of $289,170 for Niagara Sanatorium.
3/ Includes payments for medical care to the medically indigent.

Table 26. Expenditures by Local Departments of Public Welfare for Care to the Medically Indigent, by Specific Items, Niagara County, 1942.

| Expenditure Item | Total | Department of Public Welfare | | | |
|---|---|---|---|---|---|
| | | Niagara County | Lockport City | Niagara Falls City | North Tonawanda City |
| All items | $113,074 | $38,356 | $39,141 | $30,790 | $4,787 |
| Physician, surgeon fees | 29,085 | 16,955 | 11,049 | 313 | 768 |
| Hospitalization | 63,163 | 12,087 | 24,332 | 23,486 | 3,258 |
| Dental care | 3,620 | 1,943 | 872 | 605 | 200 |
| Nursing care | 562 | 89 | 204 | 269 | |
| Eye examinations, glasses | 1,917 | 1,012 | 287 | 610 | 8 |
| X-rays | 730 | 559 | | 171 | |
| Drugs and appliances | 13,109 | 5,120 | 2,397 | 5,039 | 553 |
| Ambulance service | 888 | 591 | | 297 | |

Table 27. Distribution of Gross Expenditures for Public Education Showing Amount Spent for School Health Program, Niagara County, July 1, 1941 - June 30, 1942. 1/

| Expenditure Item | Niagara County Total | | Lockport City | | Niagara Falls City | | No. Tonawanda City | | Rural Supervisory Districts | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent |
| Total | $4,391,112 | 100.0 | $644,007 | 100.0 | $2,468,099 | 100.0 | $472,434 | 100.0 | $806,572 | 100.0 |
| Health service 2/ | 47,849 | 1.1 | 10,792 | 1.7 | 23,839 | 1.0 | 7,251 | 1.5 | 5,967 | .7 |
| All other | 4,343,263 | 98.9 | 633,215 | 98.3 | 2,444,260 | 99.0 | 465,183 | 98.5 | 800,605 | 99.3 |

1/ Adapted from data provided by the New York State Department of Education.
2/ Same as School Medical Inspection Program.

Table 28. Detailed Expenditures for School Health Service, Niagara County, July 1, 1941 - June 30, 1942. 1/

| Expenditure Item | Niagara County Total | | Lockport City | | Niagara Falls City | | No. Tonawanda City | | Rural Supervisory Districts | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent |
| Total | $47,849 | 100.0 | $10,792 | 100.0 | $23,839 | 100.0 | $7,251 | 100.0 | $5,967 | 100.0 |
| Medical inspection 2/ | 21,904 | 45.8 | 3,682 | 34.1 | 11,634 | 48.8 | 2,600 | 35.9 | 3,988 | 66.9 |
| School nurses | 17,081 | 35.7 | 4,175 | 38.7 | 10,906 | 45.7 | 2,000 | 27.6 | — | — |
| Dental service 3/ | 6,747 | 14.1 | 1,900 | 17.6 | 1,299 | 5.5 | 2,265 | 31.2 | 1,283 | 21.4 |
| All other | 2,117 | 4.4 | 1,035 | 9.6 | — | — | 386 | 5.3 | 696 | 11.7 |

1/ Adapted from data provided by the New York State Department of Education.
2/ Salaries of physicians.
3/ Salaries of dental hygienists, dentists, etc.

Table 29. Distribution of Receipts for Public Education, by Sources of Funds, Niagara County, July 1, 1941 - June 30, 1942. 1/

| Source | Niagara County Total | | Lockport City | | Niagara Falls City | | No. Tonawanda City | | Rural Supervisory Districts | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent | Amount | Per Cent |
| All Sources | $4 452,830 | 100.0 | $658,596 | 100.0 | $2,500,701 | 100.0 | $477,879 | 100.0 | $815,654 | 100.0 |
| Property Tax | 2,681,454 | 60.2 | 391,659 | 59.5 | 1,686,446 | 67.5 | 258,658 | 54.1 | 344,691 | 42.3 |
| State aid | 1,616,827 | 36.3 | 252,893 | 38.4 | 779,564 | 31.1 | 204,492 | 42.8 | 379,878 | 46.6 |
| Federal aid | 16,201 | .4 | 939 | .1 | 10,693 | .4 | 358 | .1 | 4,211 | .5 |
| Return taxes from County Treasurer | 40,863 | .9 | - | - | - | - | - | - | 40,863 | 5.0 |
| Loans | 3,539 | .1 | - | - | - | - | - | - | 3,539 | .4 |
| Bonds | 15,711 | .3 | 1,810 | .3 | - | - | - | - | 13,901 | 1.7 |
| All other 2/ | 78,235 | 1.8 | 11,295 | 1.7 | 23,998 | 1.0 | 14,371 | 3.0 | 28,571 | 3.5 |

1/ Adapted from data provided by the New York State Department of Education.
2/ Tuition, refunds, etc.

Table 30. Summary of Hospital and Medical Insurance Plans in Specified Industries, Niagara County, June 1944.

| Industrial Firm and Insurance Carrier | Per cent of employees insured | Employer contribution toward premium | Persons covered | | Benefits to employees only | | | | | | | | | | | Benefits to dependents | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Employee only | Employee and dependents [2] | Hospitalization | Hospital maternity care | Extra hospital charges | Surgery | Dental and optical care | Weekly sickness and accident benefit [3] | Insurance [3] | | | | | Hospitalization | Hospital maternity care | Extra hospital charges | Surgery |
| | | | | | | | | | | | Dismemberment | Disability | Accidental death | Annuity | Life | | | | |
| BELL AIRCRAFT CORPORATION<br>Aetna Life Insurance Company | 95% | 35% | | x | x | x | x | x | | x | | | | | x | x | x | x | |
| BUFFALO BOLT COMPANY<br>Aetna Life Insurance Company | 76% | 50% | | x | x | x | x | x | | | | | | | x | x | x | x | |
| DUREZ PLASTICS AND CHEMICALS, INCORPORATED<br>Hospital Service Corporation [4]<br>Metropolitan Life Insurance Company | NR<br>55% | None<br>Yes | x | x | x | x | x | | | x | | | | | | x | x | x | |
| E.I. DUPONT de NEMOURS AND COMPANY<br>Hospital Service Corporation<br>Group Accident and Health Insurance (Equitable Life Assurance Society)<br>Dupont Disability Wage Plan | 85%<br>95%<br>100% | None<br>Yes<br>100% | x<br>x | x | x | x | x | | | x<br>x | | | | | | x | x | x | |
| HARRISON RADIATOR DIVISION OF GENERAL MOTORS CORPORATION<br>Hospital Service Corporation<br>Employees Group Insurance Plan | 74%<br>89% | None<br>33% | x | x | x | x | x | x | | x | | | | | x | x | x | x | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERNATIONAL PAPER COMPANY | | | | | | | | | | | | | | | | | | | |
| Hospital Service Corporation | 47% 5/ | None | | x | x | x | x | | | x | x | x | x | | x | x | x | x | |
| Employees Mutual benefit Association (Metropolitan Life Insurance Company) | 88% 6/ | 50% | x | | | | | | | | | | | | | | | | |
| KIMBERLY-CLARK CORPORATION | | | | | | | | | | | | | | | | | | | |
| Hospital Service Corporation | 35% | None | | x | x | x | x | | | | | | | | | x | x | x | |
| Group Life Insurance Plan (Prudential Insurance Company) | 100% | 75% | x | | | | | | | | | x | | | | | | | |
| Employees Mutual Benefit Association | 65% | 15% | x | | x | | x | x | x | x | x | | | | x | | | | |
| LOCKPORT COTTON BATTING COMPANY | | | | | | | | | | | | | | | | | | | |
| Hospital Service Corporation | 90% | None | | x | x | x | x | | | | | | | | | x | x | x | |
| NIAGARA TEXTILE COMPANY | | | | | | | | | | | | | | | | | | | |
| Hospital Service Corporation | NR | None | | x | x | x | x | | | | | | | | | x | x | x | |
| NORTON LABORATORIES, INCORPORATED | | | | | | | | | | | | | | | | | | | |
| Hospital Service Corporation | NR | None | | x | x | x | x | | | | | | | | | x | x | x | |
| REMINGTON RAND, INCORPORATED | | | | | | | | | | | | | | | | | | | |
| Aetna Life Insurance Company | 90% | Yes | | x | x | x | x | x | | x | | | | | x | x | x | x | x |
| SIMMONDS STEEL MILLS | | | | | | | | | | | | | | | | | | | |
| Hospital Service Corporation | 63% | None | | x | x | x | x | | | | | | | | | x | x | x | |
| THE CARBORUNDUM COMPANY | | | | | | | | | | | | | | | | | | | |
| Hospital Service Corporation | 41% | None | | x | x | x | x | | | | | | | | | x | x | x | |
| S. I. C. Benefit Association | 90% | Yes | x | | x | x | x | x | 7/ | x | | | | | x | | | | |
| Employees Retirement Annuity Plan (Metropolitan Life Insurance Company) | 19% | Yes | x | | | | | | | | | | | x | | | | | |
| Metropolitan Life Insurance Company | 75% | Yes | x | | | | | | | | | x | | | x | | | | |

NR indicates "no report."
1/ Dependents usually are spouse of employee and children under 18 years old.
2/ When dependents are covered premium is greater than that for single employee.
3/ Benefits usually vary with amount of weekly wages. Higher wages enforce higher premiums.
4/ Hospital Service Corp. of Western New York.
5/ Per cent insured in Niagara Falls plant. North Tonawanda plant, 36% insured.
6/ Per cent insured in Niagara Falls plant. North Tonawanda plant, 75% insured.
7/ Minor surgery only.

Table 31. Selected Resident Vital Statistics, Niagara County, 1938 - 1942. 1/

| | 1938 | | 1939 | | 1940 | | 1941 | | 1942 | | Ann. Aver. 1938-1942 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate |
| Live births | 2,718 | 17.2 | 2,571 | 16.1 | 2,878 | 17.9 | 3,241 | 20.1 | 3,902 | 22.8 | 3,062 | 18.9 |
| Stillbirths | 84 | 30.0 | 62 | 23.5 | 75 | 25.4 | 78 | 23.5 | 96 | 24.0 | 79 | 25.2 |
| Deaths | 1,640 | 10.4 | 1,625 | 10.2 | 1,651 | 10.3 | 1,750 | 10.8 | 1,756 | 10.3 | 1,684 | 10.4 |
| Infant mortality | 116 | 42.7 | 107 | 41.6 | 110 | 38.2 | 108 | 33.3 | 139 | 35.6 | 116 | 37.9 |
| Neonatal mortality | 69 | 25.4 | 72 | 28.0 | 79 | 27.4 | 79 | 24.4 | 100 | 25.6 | 80 | 26.1 |
| Maternal mortality | 9 | 32.1 | 5 | 19.0 | 6 | 20.3 | 7 | 21.1 | 8 | 20.0 | 7 | 22.3 |
| Deaths from | | | | | | | | | | | | |
| Typhoid fever | - | - | - | - | 1 | 0.6 | - | - | 1 | 0.6 | 2/ | 0.2 |
| Scarlet fever | 1 | 0.6 | 3 | 1.9 | 2 | 1.2 | 1 | 0.6 | - | - | 1 | 0.9 |
| Measles | 6 | 3.8 | - | - | - | - | - | - | 1 | 0.6 | 1 | 0.9 |
| Whooping cough | 1 | 0.6 | 1 | 0.6 | 3 | 1.9 | 3 | 1.9 | 2 | 1.2 | 2 | 1.2 |
| Diphtheria | - | - | - | - | - | - | - | - | - | - | - | - |
| Tuberculosis (all forms) | 64 | 40.4 | 42 | 26.4 | 43 | 26.8 | 46 | 28.5 | 39 | 22.8 | 47 | 28.9 |
| Pneumonia (all forms) | 71 | 44.9 | 85 | 53.4 | 58 | 36.2 | 65 | 40.3 | 65 | 38.0 | 69 | 42.4 |
| Cancer | 215 | 135.9 | 184 | 115.5 | 195 | 121.6 | 241 | 149.3 | 202 | 117.9 | 207 | 127.9 |
| Intracranial lesions of vascular origin | 121 | 76.5 | 96 | 60.3 | 141 | 87.9 | 146 | 90.4 | 124 | 72.4 | 126 | 77.5 |
| Diseases of the heart | 498 | 314.7 | 537 | 337.1 | 518 | 323.0 | 555 | 343.7 | 614 | 358.5 | 544 | 335.8 |
| Diseases of the arteries | 29 | 18.3 | 40 | 25.1 | 42 | 26.2 | 22 | 13.6 | 30 | 17.5 | 33 | 20.1 |
| Acute and chronic nephritis | 122 | 77.1 | 107 | 67.2 | 128 | 79.8 | 89 | 55.1 | 121 | 70.6 | 113 | 69.9 |
| Appendicitis | 24 | 15.2 | 14 | 8.8 | 17 | 10.6 | 10 | 6.2 | 16 | 9.3 | 16 | 10.0 |
| Hernia and intestinal obstruction | 15 | 9.5 | 19 | 11.9 | 24 | 15.0 | 19 | 11.8 | 19 | 11.1 | 19 | 11.8 |
| Accidents (total) 3/ | 121 | 76.5 | 105 | 65.9 | 110 | 68.6 | 145 | 89.8 | 136 | 79.4 | 123 | 76.1 |
| Automobile 3/ | 45 | 28.4 | 26 | 16.3 | 47 | 29.3 | 53 | 32.8 | 36 | 21.0 | 41 | 25.5 |
| Home 3/ | 4/ | 4/ | 34 | 21.3 | 32 | 20.0 | 49 | 30.3 | 46 | 26.9 | 40 5/ | 24.7 5/ |

Note: Total birth and death rates are per 1,000 population; death rates under one year, per 1,000 live births; stillbirth rates per 1,000 total births (including stillbirths); maternal mortality, per 10,000 total births (including stillbirths); death rates from specific causes, per 100,000 population.

1/ Data collected and compiled by New York State Department of Health.
2/ Less than one.
3/ Allocated to place of occurrence.
4/ Not available.
5/ Annual average, 1939 - 1942.

Table 32. Selected Resident Vital Statistics, Lockport City, 1938 - 1942 1/

| | 1938 | | 1939 | | 1940 | | 1941 | | 1942 | | Ann. Aver. 1938 - 1942 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate |
| Live births | 412 | 17.0 | 409 | 16.8 | 460 | 18.8 | 433 | 17.7 | 492 | 20.1 | 441 | 18.1 |
| Stillbirths | 15 | 35.1 | 10 | 23.9 | 9 | 19.2 | 13 | 29.1 | 10 | 19.9 | 11 | 25.2 |
| Deaths | 304 | 12.6 | 300 | 12.4 | 317 | 13.0 | 326 | 13.3 | 307 | 12.5 | 311 | 12.7 |
| Infant mortality | 11 | 26.7 | 20 | 48.9 | 18 | 39.1 | 13 | 30.0 | 14 | 28.5 | 15 | 34.5 |
| Neonatal mortality | 3 | 7.3 | 14 | 34.2 | 13 | 28.3 | 11 | 25.4 | 9 | 18.3 | 10 | 22.7 |
| Maternal mortality | 2 | 46.8 | - | - | 1 | 21.3 | 1 | 22.4 | 1 | 19.9 | 1 | 22.1 |
| Deaths from | | | | | | | | | | | | |
| Typhoid fever | - | - | - | - | 1 | 4.1 | - | - | - | - | 2/ | 0.8 |
| Scarlet fever | - | - | - | - | 1 | 4.1 | - | - | - | - | 2/ | 0.8 |
| Measles | - | - | - | - | - | - | - | - | - | - | - | - |
| Whooping cough | - | - | 1 | 4.1 | 1 | 4.1 | - | - | - | - | 2/ | 1.6 |
| Diphtheria | - | - | - | - | - | - | - | - | - | - | - | - |
| Tuberculosis (all forms) | 8 | 33.1 | 9 | 37.1 | 8 | 32.8 | 7 | 28.5 | 4 | 16.3 | 7 | 29.5 |
| Pneumonia (all forms) | 5 | 20.7 | 11 | 45.3 | 8 | 32.8 | 13 | 53.0 | 6 | 24.5 | 9 | 35.3 |
| Cancer | 37 | 153.1 | 29 | 119.4 | 33 | 135.2 | 46 | 187.5 | 38 | 154.9 | 37 | 150.1 |
| Intracranial lesions of vascular origin | 23 | 95.2 | 25 | 102.9 | 29 | 118.8 | 26 | 106.0 | 29 | 118.2 | 26 | 108.3 |
| Diseases of the heart | 105 | 434.5 | 98 | 403.5 | 113 | 462.9 | 106 | 432.1 | 126 | 513.5 | 110 | 449.4 |
| Diseases of the arteries | 9 | 37.2 | 16 | 65.9 | 8 | 32.8 | 6 | 24.5 | 5 | 20.4 | 9 | 36.1 |
| Acute and chronic nephritis | 33 | 136.6 | 10 | 41.2 | 25 | 102.4 | 19 | 77.5 | 21 | 85.6 | 22 | 88.6 |
| Appendicitis | 6 | 24.8 | 2 | 8.2 | 3 | 12.3 | 1 | 4.1 | 2 | 8.2 | 3 | 11.5 |
| Hernia and intestinal obstruction | 1 | 4.1 | - | - | 6 | 24.6 | 3 | 12.2 | 5 | 20.4 | 3 | 12.3 |
| Accidents (total) 3/ | 20 | 82.8 | 21 | 86.5 | 11 | 45.1 | 23 | 93.8 | 18 | 73.4 | 19 | 76.3 |
| Automobile 3/ | 3 | 12.4 | 4 | 16.5 | 2 | 8.2 | 6 | 24.5 | 3 | 12.2 | 4 | 14.8 |
| Home 3/ | 4/ | 4/ | 7 | 28.8 | 4 | 16.4 | 14 | 57.1 | 13 | 53.0 | 10 5/ | 38.9 5/ |

Note: Total birth and death rates are per 1,000 population; death rates under one year, per 1,000 live births; stillbirth rates, per 1,000 total births (including stillbirths); maternal mortality, per 10,000 total births (including stillbirths); death rates from specific causes, per 100,000 population.

1/ Data collected and compiled by New York State Department of Health.
2/ Less than one.
3/ Allocated to place of occurrence.
4/ Not available.
5/ Annual average, 1939 - 1942.

Table 33. Selected Resident Vital Statistics, Niagara Falls City, 1938 - 1942 [1]

| | 1938 | | 1939 | | 1940 | | 1941 | | 1942 | | Ann. Aver. 1938-1942 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate |
| Live births | 1,412 | 18.2 | 1,254 | 16.1 | 1,411 | 18.1 | 1,605 | 20.5 | 2,043 | 23.7 | 1,545 | 19.4 |
| Stillbirths | 41 | 28.2 | 33 | 25.6 | 38 | 26.2 | 40 | 24.3 | 47 | 22.5 | 40 | 25.1 |
| Deaths | 720 | 9.3 | 684 | 8.8 | 701 | 9.0 | 792 | 10.1 | 821 | 9.5 | 744 | 9.3 |
| Infant mortality | 59 | 41.8 | 42 | 33.5 | 55 | 39.0 | 53 | 33.0 | 88 | 43.1 | 59 | 38.4 |
| Neonatal mortality | 37 | 26.2 | 27 | 21.5 | 40 | 28.3 | 41 | 25.5 | 66 | 32.3 | 42 | 27.3 |
| Maternal mortality | 5 | 34.4 | 2 | 15.5 | 3 | 20.7 | 4 | 24.3 | 7 | 33.5 | 4 | 26.5 |
| Deaths from | | | | | | | | | | | | |
| Typhoid fever | - | - | - | - | - | - | - | - | - | - | - | - |
| Scarlet fever | - | - | 3 | 3.9 | - | - | - | - | - | - | 1 | 0.8 |
| Measles | 5 | 6.4 | - | - | - | - | - | - | - | - | 1 | 1.3 |
| Whooping cough | - | - | - | - | - | - | - | - | 1 | 1.2 | 2/ | 0.3 |
| Diphtheria | - | - | - | - | - | - | - | - | - | - | - | - |
| Tuberculosis (all forms) | 31 | 40.0 | 21 | 27.0 | 20 | 25.6 | 21 | 26.8 | 20 | 23.2 | 23 | 28.4 |
| Pneumonia (all forms) | 48 | 61.9 | 49 | 63.0 | 28 | 35.9 | 39 | 49.8 | 45 | 52.1 | 42 | 52.5 |
| Cancer | 96 | 123.7 | 81 | 104.1 | 89 | 114.0 | 115 | 146.8 | 93 | 107.7 | 95 | 119.0 |
| Intracranial lesions of vascular origin | 46 | 59.3 | 28 | 36.0 | 56 | 71.7 | 48 | 61.3 | 51 | 59.1 | 46 | 57.5 |
| Diseases of the heart | 200 | 257.8 | 205 | 263.4 | 203 | 259.9 | 239 | 305.0 | 256 | 296.5 | 221 | 277.0 |
| Diseases of the arteries | 7 | 9.0 | 9 | 11.6 | 14 | 17.9 | 7 | 8.9 | 8 | 9.3 | 9 | 11.3 |
| Acute and chronic nephritis | 50 | 64.5 | 62 | 79.7 | 55 | 70.4 | 41 | 52.3 | 66 | 76.4 | 55 | 68.8 |
| Appendicitis | 14 | 18.0 | 7 | 9.0 | 8 | 10.2 | 6 | 7.7 | 6 | 6.9 | 8 | 10.3 |
| Hernia and intestinal obstruction | 6 | 7.7 | 10 | 12.8 | 9 | 11.5 | 11 | 14.0 | 9 | 10.4 | 9 | 11.3 |
| Accidents (total) 3/ | 44 | 56.7 | 47 | 60.4 | 32 | 41.0 | 60 | 76.6 | 45 | 52.1 | 46 | 57.3 |
| Automobile 3/ | 10 | 12.9 | 10 | 12.8 | 9 | 11.5 | 20 | 25.5 | 14 | 16.2 | 13 | 15.8 |
| Home 3/ | 4/ | 4/ | 15 | 19.3 | 15 | 19.2 | 20 | 25.5 | 16 | 18.5 | 17 5/ | 20.6 5/ |

Note: Total birth and death rates are per 1,000 population; death rates under one year, per 1,000 live births; stillbirth rates, per 1,000 total births (including stillbirths); maternal mortality, per 10,000 total births (including stillbirths); death rates from specific causes, per 100,000 population.

1/ Data collected and compiled by New York State Department of Health.
2/ Less than one.
3/ Allocated to place of occurrence.
4/ Not available.
5/ Annual average, 1939 - 1942.

Table 34. Selected Resident Vital Statistics, North Tonawanda City, 1938 - 1942 1/

| | 1938 | | 1939 | | 1940 | | 1941 | | 1942 | | Ann. Aver. 1938-1942 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate |
| Live births | 361 | 18.0 | 336 | 16.7 | 356 | 17.5 | 417 | 20.4 | 516 | 24.9 | 397 | 19.5 |
| Stillbirths | 7 | 19.0 | 6 | 17.5 | 9 | 24.7 | 8 | 18.8 | 16 | 30.1 | 9 | 22.6 |
| Deaths | 187 | 9.3 | 217 | 10.8 | 174 | 8.6 | 192 | 9.4 | 205 | 9.9 | 195 | 9.6 |
| Infant mortality | 19 | 52.6 | 18 | 53.6 | 6 | 16.9 | 10 | 24.0 | 13 | 25.2 | 13 | 33.2 |
| Neonatal mortality | 13 | 36.0 | 15 | 44.6 | 4 | 11.2 | 6 | 14.4 | 11 | 21.3 | 10 | 24.7 |
| Maternal mortality | 1 | 27.2 | 1 | 29.2 | - | - | - | - | - | - | 2/ | 9.8 |
| Deaths from | | | | | | | | | | | | |
| Typhoid fever | - | - | - | - | - | - | - | - | - | - | - | - |
| Scarlet fever | 1 | 5.0 | - | - | - | - | - | - | - | - | 2/ | 1.0 |
| Measles | - | - | - | - | - | - | - | - | - | - | - | - |
| Whooping cough | 1 | 5.0 | - | - | - | - | 2 | 9.8 | - | - | 1 | 3.0 |
| Diphtheria | - | - | - | - | - | - | - | - | - | - | - | - |
| Tuberculosis (all forms) | 10 | 49.9 | 5 | 24.8 | 7 | 34.5 | 9 | 44.1 | 5 | 24.1 | 7 | 35.4 |
| Pneumonia (all forms) | 5 | 25.0 | 8 | 39.7 | 3 | 14.8 | 4 | 19.6 | 5 | 24.1 | 5 | 24.6 |
| Cancer | 29 | 144.7 | 26 | 129.0 | 23 | 113.4 | 30 | 147.0 | 28 | 135.1 | 27 | 133.8 |
| Intracranial lesions of vascular origin | 18 | 89.8 | 15 | 74.4 | 21 | 103.5 | 24 | 117.6 | 13 | 62.7 | 18 | 89.6 |
| Diseases of the heart | 48 | 239.5 | 75 | 372.0 | 48 | 236.6 | 64 | 313.6 | 75 | 361.9 | 62 | 305.1 |
| Diseases of the arteries | 3 | 15.0 | 3 | 14.9 | 5 | 24.6 | 3 | 14.7 | 8 | 38.6 | 4 | 21.6 |
| Acute and chronic nephritis | 11 | 54.9 | 12 | 59.5 | 14 | 69.0 | 7 | 34.3 | 10 | 48.2 | 11 | 53.1 |
| Appendicitis | - | - | 4 | 19.8 | 1 | 4.9 | - | - | 1 | 4.8 | 1 | 5.9 |
| Hernia and intestinal obstruction | 4 | 20.0 | 2 | 9.9 | 1 | 4.9 | 1 | 4.9 | - | - | 2 | 7.9 |
| Accidents (total) 3/ | 11 | 54.9 | 8 | 39.7 | 15 | 73.9 | 14 | 68.6 | 15 | 72.4 | 13 | 62.0 |
| Automobile 3/ | 4 | 20.0 | 2 | 9.9 | 3 | 14.8 | 3 | 14.7 | 2 | 9.6 | 3 | 13.8 |
| Home 3/ | 4/ | 4/ | 3 | 14.9 | 2 | 9.9 | 5 | 24.5 | 2 | 9.6 | 3 5/ | 14.7 5/ |

Note: Total birth and death rates per 1,000 population; death rates under one year, per 1,000 live births; stillbirth rates, per 1,000 total births (including stillbirths); maternal mortality, per 10,000 total births (including stillbirths); death rates from specific causes, per 100,000 population.

1/ Data collected and compiled by New York State Department of Health.
2/ Less than one.
3/ Allocated to place of occurrence.
4/ Not available.
5/ Annual average, 1939 - 1942.

Table 35 . Selected Resident Vital Statistics, Niagara County Exclusive of Niagara Falls, Lockport and North Tonawanda Cities, 1938 - 1942. 1/

| | 1938 | | 1939 | | 1940 | | 1941 | | 1942 | | Ann.Aver. 1938-1942 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate | No. | Rate |
| Live births | 533 | 14.6 | 572 | 15.5 | 651 | 17.3 | 786 | 20.6 | 851 | 21.5 | 679 | 18.0 |
| Stillbirths | 21 | 37.9 | 13 | 22.2 | 19 | 28.4 | 17 | 21.2 | 23 | 26.3 | 19 | 26.7 |
| Deaths | 429 | 11.8 | 424 | 11.5 | 459 | 12.2 | 440 | 11.5 | 423 | 10.7 | 435 | 11.5 |
| Infant mortality | 27 | 50.7 | 27 | 47.2 | 31 | 47.6 | 32 | 40.7 | 24 | 28.2 | 28 | 41.6 |
| Neonatal mortality | 16 | 30.0 | 16 | 28.0 | 22 | 33.8 | 21 | 26.7 | 14 | 16.5 | 18 | 26.2 |
| Maternal mortality | 1 | 18.1 | 2 | 34.2 | 2 | 29.9 | 2 | 24.9 | - | - | 1 | 20.1 |
| Deaths from | | | | | | | | | | | | |
| Typhoid fever | - | - | - | - | - | - | - | - | 1 | 2.5 | 2/ | 0.5 |
| Scarlet fever | - | - | - | - | 1 | 2.7 | 1 | 2.6 | - | - | 2/ | 1.1 |
| Measles | 1 | 2.7 | - | - | - | - | - | - | 1 | 2.5 | 2/ | 1.1 |
| Whooping cough | - | - | - | - | 2 | 5.3 | 1 | 2.6 | 1 | 2.5 | 1 | 2.1 |
| Diphtheria | - | - | - | - | - | - | - | - | - | - | - | - |
| Tuberculosis (all forms) | 15 | 41.2 | 7 | 18.9 | 8 | 21.3 | 9 | 23.6 | 10 | 25.2 | 10 | 25.9 |
| Pneumonia (all forms) | 13 | 35.7 | 17 | 45.9 | 19 | 50.5 | 9 | 23.6 | 9 | 22.7 | 13 | 35.5 |
| Cancer | 53 | 145.4 | 48 | 129.7 | 50 | 133.0 | 50 | 131.0 | 43 | 108.4 | 49 | 129.2 |
| Intracranial lesions of vascular origin | 34 | 93.3 | 28 | 75.6 | 35 | 93.1 | 48 | 125.8 | 31 | 78.2 | 35 | 93.2 |
| Diseases of the heart | 145 | 397.9 | 159 | 429.5 | 154 | 409.7 | 146 | 382.5 | 157 | 395.8 | 152 | 402.9 |
| Diseases of the arteries | 10 | 27.4 | 12 | 32.4 | 15 | 39.9 | 6 | 15.7 | 9 | 22.7 | 10 | 27.5 |
| Acute and chronic nephritis | 28 | 76.8 | 23 | 62.1 | 34 | 90.4 | 22 | 57.6 | 24 | 60.5 | 26 | 69.4 |
| Appendicitis | 4 | 11.0 | 1 | 2.7 | 5 | 13.3 | 3 | 7.9 | 7 | 17.6 | 4 | 10.6 |
| Hernia and intestinal obstruction | 4 | 11.0 | 7 | 18.9 | 8 | 21.3 | 4 | 10.5 | 5 | 12.6 | 6 | 14.8 |
| Accidents (total) 3/ | 46 | 126.2 | 29 | 78.3 | 52 | 138.3 | 48 | 125.8 | 58 | 46.2 | 47 | 123.4 |
| Automobile 3/ | 28 | 76.8 | 10 | 27.0 | 33 | 87.8 | 24 | 62.9 | 17 | 42.9 | 22 | 59.3 |
| Home 3/ | 4/ | 4/ | 9 | 24.3 | 11 | 29.3 | 10 | 26.2 | 15 | 37.8 | 11 5/ | 29.5 5/ |

Note: Total birth and death rates are per 1,000 population; death rates under one year, per 1,000 live births; stillbirth rates, per 1,000 total births (including stillbirths); maternal mortality, per 10,000 total births (including stillbirths); death rates from specific causes, per 100,000 population.

1/ Data collected and compiled by New York State Department of Health.
2/ Less than one.
3/ Allocated to place of occurrence.
4/ Not available.
5/ Annual average, 1939 - 1942.

Table 36 - Selected Vital Indices for Residents of New York State, Exclusive of New York City, 1938 - 1942 [1]

| | 1938 | 1939 | 1940 | 1941 | 1942 | Ann. Aver. 1938 - 1942 |
|---|---|---|---|---|---|---|
| Live births | 15.0 | 14.6 | 15.2 | 16.3 | 18.9 | 16.0 |
| Stillbirths | 26.1 | 26.5 | 25.3 | 24.2 | 23.4 | 25.0 |
| Deaths | 11.9 | 12.0 | 11.8 | 11.5 | 11.6 | 11.8 |
| Infant mortality | 43.4 | 41.1 | 39.4 | 35.1 | 35.2 | 38.5 |
| Neonatal mortality | 29.5 | 27.5 | 26.7 | 24.9 | 24.8 | 26.5 |
| Maternal mortality | 40.1 | 30.5 | 28.2 | 23.6 | 21.2 | 28.2 |
| Deaths from | | | | | | |
| Typhoid fever | 0.6 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 |
| Scarlet fever | 0.8 | 0.6 | 0.4 | 0.4 | 0.2 | 0.5 |
| Measles | 0.9 | 0.9 | 0.2 | 0.4 | 0.2 | 0.5 |
| Whooping cough | 1.4 | 1.6 | 1.5 | 1.0 | 1.4 | 1.4 |
| Diphtheria | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| Tuberculosis (all forms) | 38.5 | 37.2 | 33.7 | 31.9 | 33.2 | 34.9 |
| Pneumonia (all forms) | 57.2 | 50.8 | 42.0 | 37.9 | 38.4 | 45.2 |
| Cancer | 154.0 | 154.1 | 150.3 | 151.0 | 152.7 | 152.4 |
| Intracranial lesions of vascular origin | 96.4 | 99.5 | 101.8 | 102.1 | 104.4 | 100.8 |
| Diseases of the heart | 383.5 | 402.7 | 404.1 | 400.7 | 408.2 | 399.9 |
| Diseases of the arteries | 29.2 | 31.9 | 32.1 | 32.0 | 35.3 | 32.1 |
| Acute and chronic nephritis | 92.9 | 87.9 | 86.6 | 76.9 | 72.2 | 83.2 |
| Appendicitis | 11.4 | 10.8 | 10.4 | 8.3 | 6.1 | 9.4 |
| Hernia and intestinal obstruction | 11.0 | 10.6 | 10.6 | 9.7 | 10.0 | 10.4 |
| Accidents (total) [2] | 79.4 | 75.3 | 76.4 | 78.1 | 72.4 | 76.3 |
| Automobile [2] | 27.2 | 26.5 | 25.6 | 29.4 | 21.5 | 26.0 |
| Home [2] | [3] | 28.1 | 29.7 | 28.8 | 29.6 | 29.1 [4] |

Note: Total birth and death rates are per 1,000 population; infant and neonatal mortality rates per 1,000 live births; stillbirth rates, per 1,000 total births (including stillbirths); maternal mortality rates per 10,000 total births (including stillbirths); death rates from specific causes per 100,000 population.

1/ Compiled by New York State Department of Health.

2/ Allocated to place of occurrence.

3/ Not available.

4/ Annual average, 1939 - 1942.

Table 37. Selected Vital Indices for Residents of Places under 10,000 Population in New York State, 1938 - 1942 1/

| | 1938 | 1939 | 1940 | 1941 | 1942 | Ann.Aver. 1938 - 1942 |
|---|---|---|---|---|---|---|
| Live births | 15.4 | 15.2 | 16.0 | 16.9 | 18.8 | 16.5 |
| Stillbirths | 26.5 | 28.5 | 25.6 | 23.5 | 23.1 | 25.1 |
| Deaths | 12.2 | 12.1 | 12.3 | 11.7 | 11.8 | 12.0 |
| Infant mortality | 43.5 | 42.1 | 41.4 | 36.7 | 35.7 | 39.6 |
| Neonatal mortality | 29.4 | 27.4 | 27.6 | 25.5 | 24.1 | 26.6 |
| Maternal mortality | 37.7 | 29.7 | 28.9 | 21.9 | 21.1 | 27.4 |
| Deaths from | | | | | | |
| Typhoid fever | 0.8 | 0.4 | 0.3 | 0.2 | 0.3 | 0.4 |
| Scarlet fever | 0.7 | 0.6 | 0.4 | 0.5 | 0.3 | 0.5 |
| Measles | 1.0 | 1.3 | 0.3 | 0.4 | 0.2 | 0.7 |
| Whooping cough | 1.7 | 2.0 | 2.1 | 1.1 | 2.0 | 1.8 |
| Diphtheria | 0.1 | 0.1 | 0.1 | - | 2/ | 0.1 |
| Tuberculosis (all forms) | 28.7 | 26.8 | 27.1 | 22.6 | 26.1 | 26.2 |
| Pneumonia (all forms) | 53.9 | 49.4 | 43.7 | 35.4 | 36.3 | 43.7 |
| Cancer | 153.9 | 156.4 | 149.2 | 149.3 | 151.1 | 152.0 |
| Intracranial lesions of vascular origin | 3/ | 3/ | 113.2 | 110.5 | 115.5 | 113.1 4/ |
| Diseases of the heart | 396.5 | 410.2 | 419.4 | 406.0 | 410.0 | 408.4 |
| Diseases of the arteries | 3/ | 3/ | 37.9 | 35.7 | 38.4 | 37.4 4/ |
| Acute and chronic nephritis | 3/ | 3/ | 93.8 | 82.8 | 76.6 | 84.3 4/ |
| Appendicitis | 3/ | 3/ | 10.4 | 8.4 | 6.4 | 8.4 4/ |
| Hernia and intestinal obstruction | 3/ | 3/ | 11.3 | 9.8 | 10.7 | 10.6 4/ |
| Accidents (total) 5/ | 101.9 | 97.5 | 99.5 | 101.9 | 92.6 | 98.7 |
| Automobile 5/ | 41.9 | 41.1 | 40.5 | 46.1 | 32.8 | 40.5 |
| Home 5/ | 3/ | 3/ | 30.3 | 29.5 | 29.7 | 29.8 4/ |

Note: Total birth and death rates are per 1,000 population; infant and neonatal mortality rates per 1,000 live births; stillbirth rates per 1,000 total births (including stillbirths); maternal mortality rates per 10,000 total births (including stillbirths); death rates from specific causes per 100,000 population.

1/ Compiled by New York State Department of Health.
2/ Less than 0.1.
3/ Not available.
4/ Annual average, 1940 - 1942.
5/ Allocated to place of occurrence.

Table 38. Annual Number of Cases of Specified Reportable Diseases, Niagara Co., 1938 - 1943.[1]

| Location | Cancer [2] | Chicken pox | Diphtheria | Gonorrhea | Measles | Pneumonia | Polio-myelitis | Scarlet fever | Small-pox | Syphilis [3] | Tuber-culosis | Typhoid | Whooping cough |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Niagara County** | | | | | | | | | | | | | |
| 1938 | NR | 748 | - | 218 | 1,522 | 409 | 19 | 488 | - | 330 | 102 | 6 | 561 |
| 1939 | NR | 340 | - | 139 | 415 | 456 | 5 | 685 | - | 343 | 89 | 6 | 196 |
| 1940 | 641 | 552 | 1 | 71 | 330 | 391 | 2 | 820 | - | 328 | 87 | 4 | 511 |
| 1941 | 357 | 636 | - | 150 | 2,141 | 337 | 2 | 146 | - | 390 | 106 | 3 | 358 |
| 1942 | 325 | 281 | - | 126 | 308 | 465 | 1 | 261 | - | 340 | 109 | 5 | 521 |
| 1943 | 339 | 374 | - | 48 | 1,208 | 528 | 5 | 247 | - | 615 | 99 | 3 | 286 |
| Annual Average No. | 416 | 489 | 4/ | 125 | 987 | 431 | 6 | 441 | - | 391 | 99 | 5 | 406 |
| **Lockport City** | | | | | | | | | | | | | |
| 1938 | NR | 23 | - | 3 | 35 | 24 | - | 33 | - | 47 | 14 | 1 | - |
| 1939 | NR | 11 | - | 1 | 106 | 72 | 1 | 15 | - | 63 | 21 | - | 20 |
| 1940 | 113 | 42 | - | 1 | 8 | 61 | - | 123 | - | 56 | 12 | 2 | 16 |
| 1941 | 84 | 107 | - | 4 | 327 | 64 | - | 4 | - | 82 | 15 | 1 | 61 |
| 1942 | 66 | 5 | - | 11 | 3 | 69 | - | 19 | - | 43 | 14 | 1 | 70 |
| 1943 | 63 | 9 | - | 2 | 14 | 23 | - | 13 | - | 87 | 18 | - | 2 |
| Annual Average No. | 82 | 33 | - | 4 | 82 | 52 | 4/ | 35 | - | 63 | 16 | 1 | 28 |
| **Niagara Falls City** | | | | | | | | | | | | | |
| 1938 | NR | 554 | - | 190 | 1,240 | 293 | 17 | 266 | - | 222 | 47 | 3 | 417 |
| 1939 | NR | 257 | - | 122 | 76 | 261 | 1 | 492 | - | 169 | 40 | 5 | 82 |
| 1940 | 272 | 390 | - | 59 | 53 | 205 | 2 | 212 | - | 188 | 39 | - | 430 |
| 1941 | 154 | 322 | - | 124 | 1,415 | 195 | 2 | 83 | - | 215 | 55 | 2 | 167 |
| 1942 | 157 | 219 | - | 13 | 224 | 286 | 1 | 175 | - | 225 | 61 | - | 377 |
| 1943 | 144 | 164 | - | 23 | 783 | 408 | 4 | 108 | - | 411 | 61 | 2 | 206 |
| Annual Average No. | 182 | 318 | - | 89 | 632 | 275 | 5 | 223 | - | 238 | 51 | 2 | 280 |
| **No. Tonawanda City** | | | | | | | | | | | | | |
| 1938 | NR | 51 | - | 14 | 120 | 17 | - | 105 | - | 25 | 19 | 1 | 110 |
| 1939 | NR | 24 | - | 7 | 119 | 33 | - | 43 | - | 35 | 11 | 1 | 13 |
| 1940 | 62 | 42 | 1 | 2 | 247 | 33 | - | 30 | - | 27 | 14 | 1 | 28 |
| 1941 | 36 | 63 | - | 5 | 107 | 24 | - | 18 | - | 40 | 16 | - | 86 |
| 1942 | 31 | 35 | - | 1 | 13 | 46 | - | 27 | - | 26 | 11 | - | 28 |
| 1943 | 48 | 28 | - | 5 | 174 | 28 | - | 26 | - | 50 | 8 | - | 7 |
| Annual Average No. | 44 | 41 | 4/ | 6 | 130 | 30 | - | 42 | - | 34 | 13 | 1 | 45 |
| **Rest of County** | | | | | | | | | | | | | |
| 1938 | NR | 120 | - | 11 | 127 | 75 | 2 | 84 | - | 36 | 22 | 1 | 34 |
| 1939 | NR | 48 | - | 9 | 114 | 90 | 3 | 135 | - | 76 | 17 | - | 81 |
| 1940 | 194 | 78 | - | 9 | 22 | 92 | - | 455 | - | 57 | 22 | 1 | 37 |
| 1941 | 83 | 144 | - | 17 | 292 | 54 | - | 41 | - | 53 | 20 | - | 44 |
| 1942 | 71 | 22 | - | 101 | 68 | 64 | - | 40 | - | 46 | 23 | 4 | 46 |
| 1943 | 84 | 173 | - | 18 | 237 | 69 | 1 | 100 | - | 67 | 12 | 1 | 71 |
| Annual Average No. | 108 | 98 | - | 28 | 143 | 74 | 1 | 143 | - | 56 | 19 | 1 | 52 |

NR - No Report

1/ Adapted from data compiled by New York State Department of Health on basis of cases reported to the Department.

2/ Cancer cases reported in first year include some diagnosed in previous years.

3/ Cases reported in year discovered which is not necessarily the year of inception.

4/ Less than 0.5 case.

Table 39. Summary of School Medical Inspection Program, by Type of School, Niagara County, July 1, 1942 - June 30, 1943. 1/

| School | Total Registration | Total Medical Examinations | Per Cent of Total Registration Examined | Number of Defects Found | Number of Defects Treated | Per Cent of Defects Treated | Defects Per 1,000 Examinations |
|---|---|---|---|---|---|---|---|
| All Schools, Total | 30,187 | 22,672 | 75.1 | 14,695 | 8,656 | 58.9 | 648 |
| City Schools | 23,921 | 16,812 | 70.3 | 10,911 | 6,605 | 60.6 | 648 |
| Lockport | 4,795 | 4,694 | 97.8 | 2,516 | 1,901 | 75.5 | 536 |
| Niagara Falls | 15,278 | 8,501 | 55.6 | 6,377 | 3,828 | 60.0 | 750 |
| North Tonawanda | 3,848 | 3,617 | 93.9 | 2,018 | 876 | 43.4 | 557 |
| Central Rural Schools | 2,191 | 2,134 | 97.4 | 1,634 | 1,112 | 68.1 | 765 |
| Barker Town | 714 | 683 | 95.7 | 415 | 137 | 33.0 | 607 |
| Newfane Town | 727 | 727 | 100.0 | 616 | 483 | 78.4 | 847 |
| Wilson Town | 750 | 724 | 96.5 | 603 | 492 | 81.6 | 844 |
| Union Free Schools | 1,390 | 1,342 | 96.5 | 634 | 354 | 55.8 | 472 |
| Gasport Village | 325 | 295 | 90.8 | 197 | 167 | 84.8 | 667 |
| Lewiston Village | 354 | 354 | 100.0 | 170 | 73 | 42.0 | 480 |
| Middleport Village | 361 | 361 | 100.0 | 201 | 93 | 46.3 | 556 |
| Youngstown Village | 350 | 332 | 94.0 | 66 | 21 | 31.0 | 198 |
| Country Elementary Schools | 2,685 | 2,384 | 88.8 | 1,516 | 585 | 38.6 | 636 |
| School District I | 599 | 551 | 92.0 | 376 | 123 | 32.7 | 682 |
| School District II | 1,031 | 915 | 88.7 | 497 | 265 | 53.3 | 543 |
| School District III | 1,055 | 918 | 87.0 | 643 | 197 | 30.6 | 700 |

1/ Adapted from annual reports made by the schools of Niagara County to the Bureau of Health Service, New York State Department of Education.

Table 40. Per Cent Distribution of Defects Found by Medical Inspection of School Children, by Type of Defect, in Schools of Niagara County, Exclusive of Country Elementary Schools, July 1, 1942 - June 30, 1943. 1/

| School | Total Defects Found | Per Cent Distribution of Defects, by Type | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | Nutrition | Teeth | Eyes | Tonsils | Heart | Hernia | Orthopedic | Posture | All Other |
| All Schools | 13,179 | 100.0 | 2.2 | 55.8 | 11.8 | 14.7 | .7 | .3 | .5 | .7 | 13.1 |
| City Schools | 10,911 | 100.0 | 1.4 | 56.0 | 12.1 | 15.9 | .6 | .3 | .5 | .8 | 12.4 |
| Lockport | 2,516 | 100.0 | 1.8 | 45.6 | 16.3 | 13.7 | 1.8 | .4 | 1.7 | 3.3 | 15.4 |
| Niagara Falls | 6,377 | 100.0 | 1.6 | 62.8 | 6.6 | 14.5 | .3 | .3 | - | - | 13.9 |
| North Tonawanda | 2,018 | 100.0 | .1 | 47.3 | 24.1 | 22.9 | .5 | .1 | .7 | - | 4.3 |
| Central Rural Schools | 1,634 | 100.0 | 1.4 | 61.4 | 8.9 | 7.1 | 1.0 | .6 | .2 | .9 | 18.5 |
| Barker Town | 415 | 100.0 | 3.4 | 46.7 | 20.9 | 5.8 | 1.2 | 1.2 | .5 | 2.7 | 17.6 |
| Newfane Town | 616 | 100.0 | 1.0 | 62.5 | 2.4 | 7.1 | 1.0 | .5 | .3 | .7 | 24.5 |
| Wilson Town | 603 | 100.0 | .5 | 70.3 | 7.1 | 8.0 | 1.0 | .2 | - | - | 12.9 |
| Union Free Schools | 634 | 100.0 | 9.8 | 39.6 | 14.2 | 14.8 | .9 | .3 | 1.5 | 1.0 | 17.9 |
| Gasport Village | 197 | 100.0 | 1.0 | 47.2 | 25.3 | 10.2 | .5 | .5 | 2.0 | 2.0 | 11.3 |
| Lewiston Village | 170 | 100.0 | 31.8 | 49.4 | 5.9 | 2.9 | .6 | - | .6 | .6 | 8.2 |
| Middleport Village | 201 | 100.0 | 2.0 | 33.8 | 14.9 | 16.4 | .9 | .5 | 1.9 | - | 29.6 |
| Youngstown Village | 66 | 100.0 | 3.0 | 9.1 | - | 54.6 | 3.0 | - | 1.5 | 1.5 | 27.3 |

1/ Adapted from annual reports made by the Schools of Niagara County to the Bureau of Health Service, New York State Department of Education.

Table 41. Per Cent of Defects Treated in Schools of Niagara County, by Type of Defect and School, Exclusive of Country Elementary Schools, July 1, 1942 - June 30, 1943. 1/

| School | Per Cent of Each Type of Defect Treated | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | All Defects | Nutrition | Teeth | Eyes | Tonsils | Heart | Hernia | Orthopedic | Posture |
| All Schools | 62.0 | 76.9 | 66.7 | 79.5 | 47.3 | 92.7 | 79.6 | 89.3 | 86.1 |
| City Schools | 60.6 | 72.5 | 58.1 | 75.5 | 41.5 | 93.2 | 73.3 | 91.1 | 86.9 |
| Lockport | 75.5 | 72.0 | 87.0 | 73.0 | 70.0 | 83.0 | 91.0 | 88.0 | 87.0 |
| Niagara Falls | 60.0 | 71.0 | 55.0 | 72.0 | 45.0 | 89.0 | 70.0 | - | - |
| North Tonawanda | 43.4 | 100.0 | 33.0 | 80.0 | 13.0 | 100.0 | 0.0 | 100.0 | - |
| Central Rural Schools | 68.1 | 39.1 | 75.6 | 48.3 | 41.3 | 58.8 | 44.4 | 25.0 | 73.3 |
| Barker Town | 33.0 | 42.9 | 39.2 | 22.9 | 16.7 | 0.0 | 20.0 | 50.0 | 100.0 |
| Newfane Town | 78.4 | 0.0 | 82.3 | 46.7 | 100.0 | 100.0 | 66.6 | 0.0 | 0.0 |
| Wilson Town | 81.6 | 100.0 | 86.1 | 100.0 | 18.7 | 66.6 | 100.0 | - | - |
| Union Free Schools | 55.8 | 64.5 | 57.8 | 84.4 | 11.7 | 83.3 | 100.0 | 90.0 | 83.3 |
| Gasport Village | 84.8 | 100.0 | 100.0 | 100.0 | 25.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Lewiston Village | 42.0 | 59.3 | 35.7 | 100.0 | 20.0 | 0.0 | - | 0.0 | 0.0 |
| Middleport Village | 46.3 | 100.0 | 32.4 | 52.0 | 15.2 | 100.0 | 100.0 | 100.0 | - |
| Youngstown Village | 31.0 | 100.0 | 0.0 | - | 0.0 | 100.0 | - | 100.0 | 100.0 |

1/ Adapted from data in annual reports of schools in Niagara County as reported to Bureau of Health Service, New York State Department of Education.

# AGENCIES AND ORGANIZATIONS IN NIAGARA COUNTY HAVING HEALTH AND MEDICAL CARE INTERESTS

Academy of Medicine of Lockport
Academy of Medicine of Niagara Falls
Academy of Medicine of North Tonawanda
American Red Cross, Erie County Chapter
American Red Cross, Niagara Falls Chapter

Bureau of Health of Niagara Falls
Bureau of Social Welfare of Niagara Falls

Council of Community Agencies of Lockport
Council of Social Welfare of Niagara Falls

DeGraff Memorial Hospital (North Tonawanda)
Dental Society of Niagara County
Department of Education of Lockport
Department of Education of Niagara Falls
Department of Education of North Tonawanda
Department of Health of Lockport
Department of Health of North Tonawanda
Department of Public Welfare of Lockport
Department of Public Welfare of Niagara County
Department of Public Welfare of North Tonawanda

Health Preparedness Committee of Lockport
Health Preparedness Committee of Niagara County
(Serving the County exclusive of the three cities)
Health Preparedness Committee of Niagara Falls
Health Preparedness Committee of North Tonawanda

Lockport City Hospital

Medical Departments of Industrial Plants
Medical Society of Niagara County
Mount Saint Mary's Hospital (Niagara Falls)

Niagara County Board of Supervisors
Niagara County Nursing Council for War Service
Niagara Falls Memorial Hospital
Niagara Sanatorium

Public Health Committee of Niagara County

School Trustees of School District I, II and III
State Department of Health (District Office)
State Department of Social Welfare (District Office)

Tuberculosis and Public Health Association of Niagara County